

Final Environmental Assessment

Base-Wide Building Demolition

Arnold Air Force Base, Tennessee

Prepared for:

**DEPARTMENT OF THE AIR FORCE
Arnold Air Force Base, Tennessee**



February 2006

CH2MHILL

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STAFF SUMMARY SHEET

2 Tabs
1. FONSI
2. Final EA

Finding of No Significant Impact:

Arnold Air Force Base, Tennessee

Base-Wide Building Demolition Environmental Assessment

Arnold Air Force Base (Arnold AFB) has prepared an Environmental Assessment (EA) (February 2006) that evaluates the potential environmental and socioeconomic impacts associated with demolition of 14 facilities within Arnold AFB. This EA is incorporated by reference into this finding.

Description of the Proposed Action

The Proposed Action consists of the demolition of 14 facilities (buildings) and other general demolition activities within the Arnold Engineering Development Center (AEDC) complex. This includes a survey and identification of any hazardous materials at existing facilities to be demolished. Demolition of these facilities would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping and grounds restoration.

The goals of the Proposed Action are part of the United States Air Force (USAF) base resizing and modernization program to:

- Reduce maintenance, operation, and utility costs and remove unsightly facilities from the installation.
- Return grounds to provide land for future Base expansion.

The demolition projects are:

- Lumber Storage Building
- CE Fabrication Shop
- Natural Resources Building
- Salt Storage Building
- Administration Building
- Engine Test Facility (ETF)-B Exhauster
- ETF-A Airside
- ETF-A Exhauster
- ETF-A Reefer
- CE Facility
- Rocket Storage
- Von Kármán Gas Dynamics Facility [VKF] Tunnel M Control Building
- VKF Vaporizer Control Building
- Propulsion Wind Tunnel (PWT) Test Fuel Building

The individual component demolition projects are scheduled to be implemented by Fiscal Year (FY) 2009. The specific components of the Proposed Action are described in the attached EA.

No-Action Alternative

The No-Action Alternative would be not to implement the project to demolish the 14 buildings. Failure to remove old structures would result in continued deterioration of those structures and place limitations on use of lands currently occupied by the buildings. The No-Action Alternative would not be consistent with the military mission of Arnold AFB or meet the goals of the United States Air Force (USAF) base resizing and modernization program.

Environmental Consequences

Under the Proposed Action, approximately 174,237 square feet of facilities would be converted to semi-improved grounds. Semi-improved grounds are areas where landscape maintenance is performed primarily for functional, operational or aesthetic reasons. The Proposed Action would have a minimal impact on AEDC land resources. The amount of land use change would be minor. During demolition, heavy equipment would be used to remove building debris. Standard construction/demolition best management practices (BMPs) would limit soil erosion and run-off to adjacent land. The improvements to Base operations would be considered beneficial and would be compatible with adjacent land uses.

Public Comment Period

A Notice of Intent to sign a FONSI for these proposed construction projects described in the EA was published in local newspapers on 10 March 2006 and the comment period ended 10 April 2006. There were no public comments received.

Restrictions

No restrictions are necessary for the Proposed Action.

Conclusion

The attached EA was prepared pursuant to 32 Code of Federal Regulations (CFR) 989 and U.S. Council on Environmental Quality (CEQ) regulations (Title 40, U.S. Code, Parts 1500-1508) for implementing the procedural requirements of the National Environmental Policy Act (NEPA). The finding of this EA is that the Proposed Action would have no significant impact on the human or natural environment. Therefore, a Finding of No Significant Impact (FONSI) is issued for the Proposed Action and no Environmental Impact Statement (EIS) is required.

Decision to proceed with the proposed action is contingent upon funds availability and final approval of the AEDC Commander.



DAVID L. STRINGER, Brig Gen, USAF
Commander

Date: 16 May 06

Contents

Acronyms and Abbreviations	iv
1.0 Purpose and Need for Action	1-1
1.1 Background	1-1
1.1.1 Operations	1-1
1.1.2 History	1-1
1.1.3 Military Mission	1-1
1.2 Proposed Action	1-3
1.2.1 Facility Demolition Projects	1-3
1.3 Need for Proposed Action.....	1-4
1.4 Related Environmental Documents.....	1-4
1.5 Decision to Be Made.....	1-4
1.6 Applicable Regulatory Requirements, Permits, and Coordination.....	1-4
1.7 Authority and Scope of the Environmental Assessment.....	1-6
1.7.1 Issues Eliminated from Detailed Analysis.....	1-6
1.7.2 Issues Studied in Detail	1-8
1.8 Document Organization	1-8
2.0 Description of Proposed Action and Alternatives	2-1
2.1 Proposed Action (Preferred Alternative)	2-1
2.1.1 Demolition Projects	2-2
2.2 No-Action Alternative	2-7
2.2.1 Comparison of Alternatives Carried Forward	2-7
3.0 Affected Environment	3-1
3.1 Land Use	3-1
3.2 Geomorphology	3-1
3.3 Hydrology	3-3
3.4 Water Quality.....	3-6
3.5 Safety and Occupational Health.....	3-6
3.6 Noise.....	3-6
3.7 Air Quality.....	3-8
3.8 IRP and Hazardous Materials.....	3-8
3.9 Cultural Resources	3-12
3.10 Traffic Flow	3-15
3.11 Utility Infrastructure	3-15
3.11.1 Water Supply System.....	3-15
3.11.2 Cooling Water System	3-15
3.11.3 Sanitary Sewer System.....	3-15
3.11.4 Stormwater Drainage System	3-15
3.11.5 Natural Gas System.....	3-16
3.11.6 Electrical Distribution System	3-16
3.11.7 Steam System	3-16
3.11.8 Solid Waste System	3-16
4.0 Environmental Consequences.....	4-1

4.1	Land Use	4-1
4.1.1	Proposed Action	4-1
4.1.2	No-Action Alternative	4-3
4.2	Geomorphology	4-3
4.2.1	Proposed Action	4-3
4.2.2	No-Action Alternative	4-4
4.3	Hydrology	4-4
4.3.1	Proposed Action	4-4
4.3.2	No-Action Alternative	4-5
4.4	Water Quality	4-5
4.4.1	Proposed Action	4-5
4.4.2	No-Action Alternative	4-5
4.5	Safety and Occupational Health	4-5
4.5.1	Proposed Action	4-5
4.5.2	No-Action Alternative	4-6
4.6	Noise	4-6
4.6.1	Proposed Action	4-6
4.6.2	No-Action Alternative	4-6
4.7	Air Quality	4-6
4.7.1	Proposed Action	4-6
4.7.2	No-Action Alternative	4-7
4.8	IRP and Hazardous Materials	4-7
4.8.1	Proposed Action	4-7
4.8.2	No-Action Alternative	4-8
4.9	Cultural Resources	4-8
4.9.1	Proposed Action	4-8
4.9.2	No-Action Alternative	4-8
4.10	Traffic Flow	4-8
4.10.1	Proposed Action	4-8
4.10.2	No-Action Alternative	4-9
4.11	Utility Infrastructure	4-9
4.11.1	Proposed Action	4-9
4.11.2	No-Action Alternative	4-9
5.0	Plan, Permit, and Management Requirements	5-1
6.0	List of Preparers	6-1
7.0	List of Contacts	7-1
8.0	References	8-1

Appendices

A Air Force Form 813s – Request for Environmental Impact Analysis

Figures

1-1	Arnold Air Force Base and General Vicinity	1-2
1-2	Issues Eliminated from Detailed Analysis	1-7
2-1	Proposed Demolition Locations – Northern.....	2-3
2-2	Proposed Demolition Locations – Southern	2-4
3-1	Land Use on Arnold Air Force Base	3-2
3-2	Streams near Proposed Demolition Locations - Northern	3-4
3-3	Streams near Proposed Demolition Locations - Southern.....	3-5
3-4	IRP Sites near Proposed Demolition Locations – Northern	3-9
3-5	IRP Sites near Proposed Demolition Locations – Southern.....	3-10

Tables

2-1	Comparison of Impacts of Considered Alternatives	2-8
3-1	Buildings Proposed for Demolition	3-13
4-1	Summary of Land Use Impacts	4-1

Acronyms and Abbreviations

ACCS	Accumulation Site
AEDC	Arnold Engineering Development Center
AFB	Air Force Base
AFI	Air Force Instruction
AFMC	Air Force Materiel Command
AFOSH	Air Force Environmental and Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zone
ASTF	Aeropropulsion Systems Test Facility
ATA	Aerospace Testing Alliance
BMP	Best Management Practice
C&D	Construction and Demolition Debris
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CE	Civil Engineering
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
CY	Calendar Year
dB	Decibel
dB _a	A-weighted Decibel Scale
DoD	Department of Defense
DoDI	Department of Defense Instruction
DRMO	Defense Reutilization and Marketing Office
DRP	Defense Reutilization Program
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
ETF	Engine Test Facility
FamCamp	Family Camping Area

FY	Fiscal Year
HSWA	Hazardous and Solid Waste Amendments
HQ	Headquarters
IAPs	Initial Accumulation Points
IRP	Installation Restoration Program
kV	Kilovolt
LDN	Day-Night Average Noise Level
MoM	Measure of Merit
MSDS	Material Safety Data Sheet
NCCGP	No Consumption-General Public
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PCB	Polychlorinated Biphenyl
PSD	Prevention of Significant Deterioration
PWT	Propulsion Wind Tunnel
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-Way
SARA	Superfund Amendments and Reauthorization Act
SDE	Air Force Environmental Management
SHE	Safety, Health, and Environmental
SHPO	State Historic Preservation Office
SOH	Safety and Occupational Health
SWPPP	Stormwater Pollution Prevention Plan
TDEC	Tennessee Department of Environment and Conservation
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and Disposal Facility
TVA	Tennessee Valley Authority

USACE	U.S. Army Corps of Engineers
USAF	United States Air Force
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
VKF	Von Kármán Gas Dynamics Facility
WQA	Water Quality Act

1.0 Purpose and Need for Action

1.1 Background

Arnold Air Force Base (AFB) is located in Coffee and Franklin Counties in Middle Tennessee. Arnold AFB is approximately 70 miles southeast of Nashville, the state capitol. Positioned near the towns of Manchester, Tullahoma, and Winchester, Arnold AFB is the largest employer in the two-county area (Figure 1-1).

Arnold AFB occupies 39,081 acres including the 3,632-acre Woods Reservoir, which contains approximately 26 billion gallons of water. Woods Reservoir is the source of drinking water for the Base and provides cooling water for facilities in the industrial area. On Arnold AFB, there are 5,785 acres of cultivated pine forests and 23,492 acres of hardwood forests. Grasslands and early-successional habitats in utility rights-of-way (ROWs) occupy 1,479 acres on the installation and provide habitat for numerous rare species (Call, 2003).

1.1.1 Operations

Arnold Engineering Development Center (AEDC), which is located on Arnold AFB, is the most advanced and largest complex of flight simulation test facilities in the world, with 53 aerodynamic and propulsion wind tunnels, rocket and turbine engine test cells, space environmental chambers, arc heaters, ballistic ranges, and other specialized units. Facilities can simulate flight conditions from sea level to altitudes of more than 100,000 feet, and from subsonic velocities to those well over Mach 20.

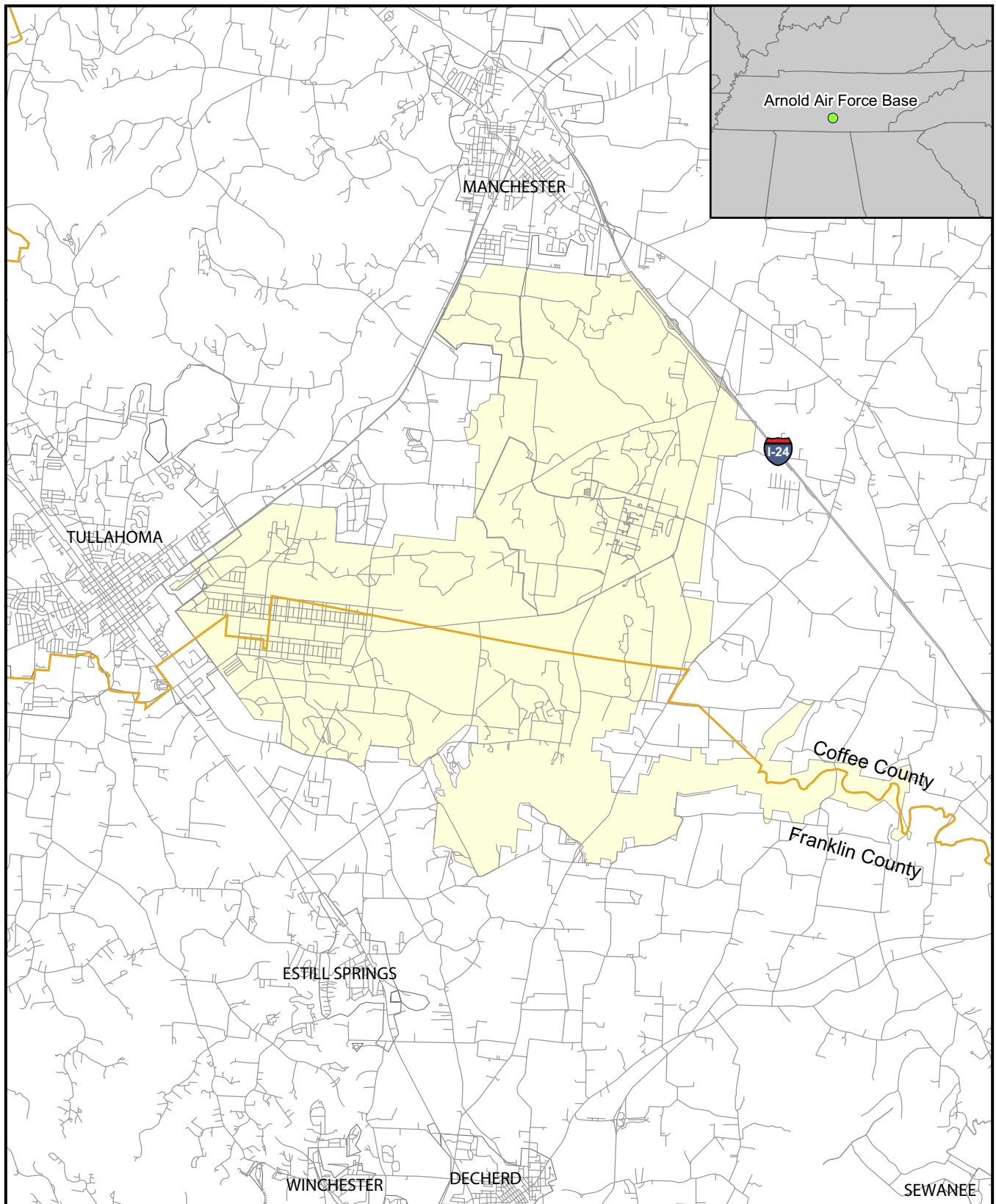
1.1.2 History

Arnold AFB is named for the late General Henry H. “Hap” Arnold, Commander of the Army Air Forces. In 1949, Congress authorized \$100 million for the construction of AEDC. On 25 June 1951, 1 year after General Arnold’s death, President Harry S. Truman dedicated the AEDC.

1.1.3 Military Mission

The existing military mission is to support the development of aerospace systems by testing hardware in facilities that simulate flight conditions.

The ecosystem management program helps maintain natural landscapes for military training. Combat readiness is founded on the ability of the armed forces to sustain realistic military training now and into the future. DoD is also a steward of significant cultural resources that provide information on the development of DoD and the country.



Legend

- Arnold AFB
- Road Centerline
- County Boundaries



0 1.25 2.5 Miles



Figure 1-1

Arnold Air Force Base and General Vicinity

Base-Wide Building Demolition
Final Environmental Assessment

1.2 Proposed Action

The Proposed Action consists of the demolition of multiple facilities (buildings) and other general demolition activities within the AEDC complex. This includes a survey and identification of any hazardous materials on existing facilities to be demolished. Demolition of these facilities would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

The goals of the Proposed Action are part of the United States Air Force (USAF) base resizing and modernization program to:

- Reduce maintenance, operation, and utility costs and remove unsightly facilities from the installation.
- Return grounds to provide land for future Base expansion.

The individual component demolition projects are scheduled to be implemented by Fiscal Year (FY) 2009.

1.2.1 Facility Demolition Projects

The 14 buildings that would be demolished are listed below:

- Lumber Storage Building
- Civil Engineering (CE) Fabrication Shop
- Natural Resources Building
- Salt Storage Building
- Administration Building
- Engine Test Facility (ETF)-B Exhauster
- ETF-A Airside
- ETF-A Exhauster
- ETF-A Reefer
- CE Facility
- Rocket Storage
- Von Kármán Gas Dynamics Facility (VKF) Tunnel M Control Building
- VKF Vaporizer Control Building
- Propulsion Wind Tunnel (PWT) Test Fuel Building

A *Draft Historic Building Inventory and Evaluation (Draft Study)* for Arnold AFB has been prepared by Geo-Marine Inc. (January 2005). As this report has not been formally adopted by Arnold AFB and coordinated with the Tennessee State Historic Preservation Office (SHPO), procedures in the 2003 Programmatic Agreement (PA) will be followed for the ETF-B Exhauster, the ETF-A Airside, the ETF-A Exhauster, the ETF-A Reefer, the VKF Tunnel M Control Building, the PWT Test Fuel Building, and the CE Facility as they may be potentially eligible for the National Register of Historic Places. Specific information about NRHP eligibility criteria are described in Table 3-1.

1.3 Need for Proposed Action

AEDC has many facilities that are underutilized and are no longer suitable for their intended purpose. These facilities cannot be economically repaired and maintained. Demolition of these facilities is part of a base rightsizing and modernization program to reduce maintenance, operation, and utility costs and remove unsightly facilities from the installation. Restoration of the grounds would provide land for future expansion of the Base.

1.4 Related Environmental Documents

The following documents were used in the preparation of this Environmental Assessment (EA):

- Integrated Ecosystem Management Plan 2003, Arnold Engineering Development Center, Arnold Air Force Base, Tennessee, for Arnold Air Force Base, prepared by Geoff Call, Conservation Biologist, ACS Environmental Services, Conservation.
- Geo-Marine, Inc. 2005. Draft Report: Historic Building and Associated Landscape Inventory and Evaluation, Arnold Air Force Base, Tennessee. Volume I. Prepared for United States Air Force AEDC/Air Force Environmental Management (SDE), Arnold AFB, Tennessee.

1.5 Decision to Be Made

A decision must be made about whether to implement the demolition projects at Arnold AFB by FY 2009 or to maintain current conditions at the proposed project locations.

1.6 Applicable Regulatory Requirements, Permits, and Coordination

The following regulations, permits, or coordination may be applicable to the Proposed Action as described in this EA:

- The National Environmental Policy Act (NEPA) of 1969
- Title 36 Code of Federal Regulations (CFR), Part 800 (36 CFR 800)
- Title 40 CFR, Parts 1500-1508 (40 CFR 1500-1508)
 - *Construction and Demolition Waste Management Pocket Guide* (USAF, 2000a).
 - *Non-hazardous Solid Waste Diversion Rate Measure of Merit (MoM)* letter (January 1999)
- DoD Directive 6050.1 (32 CFR 214)
- Department of Defense Instruction (DoDI) Number 6055.1, DoD Safety and Occupational Health (SOH) Program
- 32 CFR 989

- Air Force Instruction (AFI) 91-302
- AFI 1052
- AFI 32-7004
- AFI 32-7042
- AFI 32-9004
- Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality (amended by EO 11991)
- Executive Order (EO) 13101, "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition," 14 September 1998
- The Endangered Species Act (ESA) of 1973 (16 U.S. Code [USC] 1531-1543)
- The Fish and Wildlife Coordination Act (16 USC 661, et seq.)
- The Migratory Bird Treaty Act (16 USC 701, et seq.)
- The Clean Water Act (CWA) of 1977 and the Water Quality Act (WQA) of 1987 (33 USC 1251 et seq., as amended)
- EO 11990, Protection of Wetlands
- EO 12372, Intergovernmental Review of Federal Programs
- The Farmland Protection Act of 1981 (7 USC 4201 et. seq., as amended)
- DoD 4165.57, Air Installation Compatible Use Zone (AICUZ)
- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (as amended by the Superfund Amendments and Reauthorization Act [SARA] of 1986)
- The Resource Conservation and Recovery Act (RCRA) of 1976
- The Toxic Substances Control Act (TSCA)
- The National Historic Preservation Act (NHPA) of 1966 (16 USC 470 et seq., as amended)
- The Protection of Historic Properties (36 CFR 800) Act
- The Archeological Resources Protection Act of 1979
- The CWA of 1977 and the WQA of 1987
- EO 11988, Floodplain Management
- The Clean Air Act (CAA) (42 USC 7401 et seq., as amended)
- The Noise Control Act of 1972

- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risk

1.7 Authority and Scope of the Environmental Assessment

This document was prepared in accordance with the requirements of the NEPA of 1969, the Council on Environmental Quality (CEQ) regulations of 1978, and 32 CFR Part 989. To initiate the environmental analysis, the proponent (Arnold AFB) submitted seven Form 813s, Request for Environmental Impact Analysis (Appendix A).

1.7.1 Issues Eliminated from Detailed Analysis

The resource areas discussed below have been eliminated from detailed analysis in this document because there is no potential for the Proposed Action to impact these resources.

1.7.1.1 Air Installation Compatible Use Zone

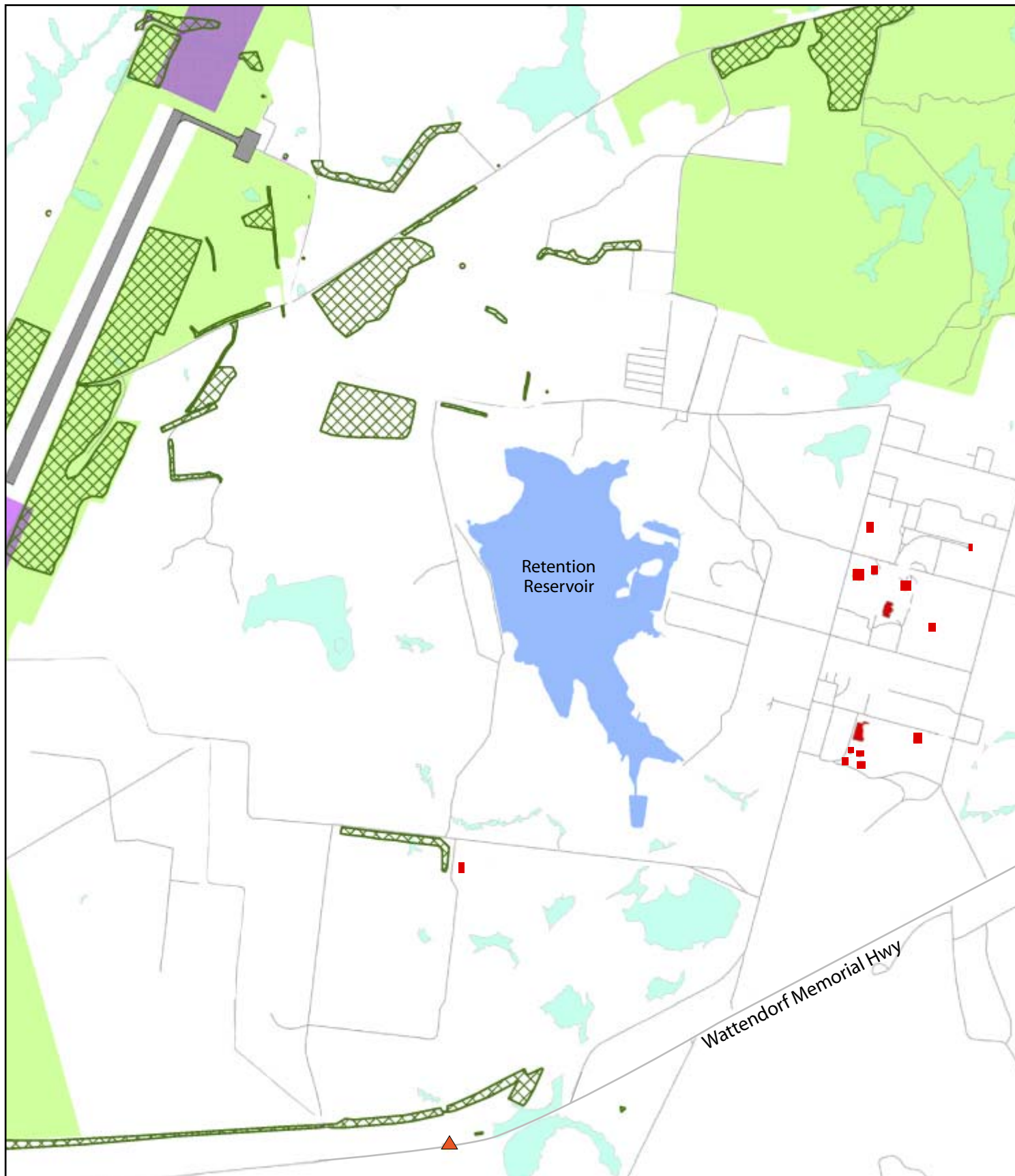
Arnold AFB has an active airfield and an exemption from Headquarters (HQ) Air Force Materiel Command (AFMC) for AICUZ because of the limited number and types of flying operations. The buildings to be demolished under the Proposed Action are not within any accident potential zones and do not encroach on the airfield (Figure 1-2). The activities involved in demolition of buildings under the Proposed Action would not impact airfield operations and management. Therefore, AICUZ was eliminated as an issue warranting further analysis.

1.7.1.2 Geology

No activities conducted under the Proposed Action would affect the underlying geologic features of Arnold AFB. Therefore, geology was eliminated as an issue warranting further analysis.

1.7.1.3 Biological Resources

All buildings scheduled for demolition are located in well-developed areas of Arnold AFB (Figure 1-2) with grounds that are routinely mowed. These areas have minimal value as natural biological settings. The Rocket Storage Building is located near a population of Eggert's sunflower (*Helianthus eggertii*). Eggert's sunflower was recently delisted as a threatened species (Federal Register 70:159 pp 48482-90). The sunflower population is located across the road from the Rocket Storage Building (Figure 1-2) and would not be impacted by its demolition. No other buildings scheduled for demolition are near locations of protected or sensitive species, or areas included in Barrens restoration, and none of the buildings to be demolished are near wetlands (Figure 1-2). Therefore, biological resources, including protected species and sensitive habitats, were eliminated as an issue warranting further analysis.



Legend

- | | |
|--|---|
| Buildings scheduled for demolition | Eggert's Sunflower Occurrences |
| Reservoir | Barrens Restoration |
| Wetland | Gray Bat Occurrences |
| Air Accident Potential Zones | |



0 1,000 2,000
Feet



Figure 1-2

Issues Eliminated from Detailed Analysis
 Base-Wide Building Demolition
 Final Environmental Assessment

1.7.1.4 Socioeconomic Factors

Socioeconomic factors are associated with the human environment, including demographics, community infrastructure and services, employment and wages, and recreation. The Proposed Action would have no significant effect on socioeconomic factors. There would be temporary employment as a result of demolition that would be spread over a period of 5 years. These effects would be temporary and minor within the regional economy. No additional staff would be required and there would be no increase or loss in permanent staffing positions on Arnold AFB. There would be no gain or loss of permanent employment in the surrounding region. There would be no change in demand for recreational facilities/opportunities and no change in recreational facilities/opportunities available to the staff of Arnold AFB or residents of the region. The Proposed Action would not cause people to move into or out of the area. With no change in population, the Proposed Action would not result in a change in demand for community infrastructure and services (fire, police, medical, housing, schools, etc.). Therefore, socioeconomics was eliminated as an issue warranting further analysis.

1.7.1.5 Environmental Justice and Protection of Children

Implementation of the components of the Proposed Action would not impact minority or low income population groups. None of the components of the Proposed Action would present environmental health or safety risks to children. Therefore, environmental justice and protection of children were eliminated as issues warranting further analysis.

1.7.2 Issues Studied in Detail

The resource areas below are discussed in detail in this document.

- Land Use
- Geomorphology
- Hydrology
- Water Quality
- Safety and Occupational Health
- Noise
- Air Quality
- Installation Restoration Program (IRP) and Hazardous Materials
- Cultural Resources
- Traffic Flow
- Utility Infrastructure

1.8 Document Organization

This EA follows the organization established by the CEQ regulations (40 CFR, Parts 1/500-1508). This document consists of the following sections:

- 1.0 Purpose and Need for Action
- 2.0 Description of the Proposed Action and Alternatives
- 3.0 Affected Environment
- 4.0 Environmental Consequences

5.0 Plan, Permit, and Management Requirements

6.0 List of Preparers

7.0 List of Contacts

8.0 References

Appendices

2.0 Description of Proposed Action and Alternatives

As required by federal regulation, this EA addresses the possible environmental impacts of the Proposed Action and a No-Action Alternative. This section provides a summary of the issues and potential impacts associated with the Proposed Action and No-Action Alternative.

2.1 Proposed Action (Preferred Alternative)

The Proposed Action consists of the demolition of multiple facilities (buildings) and other general demolition activities within the AEDC complex. The goals of the Proposed Action are part of the USAF base resizing and modernization program to:

- Reduce maintenance, operation, and utility costs and remove unsightly facilities from the installation.
- Return grounds to provide land for future Base expansion.

The following 14 buildings are proposed for demolition:

- Lumber Storage Building
- CE Fabrication Shop
- Natural Resources Building
- Salt Storage Building
- Administration Building
- ETF-B Exhauster
- ETF-A Airside
- ETF-A Exhauster
- ETF-A Reefer
- CE Facility
- Rocket Storage
- VKF Tunnel M Control Building
- VKF Vaporizer Control Building
- PWT Test Fuel Building

Prior to demolition, a survey would be conducted to determine whether any hazardous materials would be exposed during demolition. This includes analysis of Material Safety Data Sheets (MSDSs) for materials in each building recommended for demolition. Prior to demolition, any hazardous materials onsite would be identified and removed by a contractor under USAF staff direction (personal communication, Phillip Sherrill, Aerospace Testing Alliance [ATA] on 21 March 2005). Demolition of 174,237 square feet of facilities would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

Arnold Air Force Base has determined that the ETF-B Exhauster, the ETF-A Airside, the ETF-A Exhauster, the ETF-A Reefer, the VKF Tunnel M Control Building, the PWT Test Fuel Building, and the CE Facility may be potentially eligible for the NRHP Procedures in the 2003 Programmatic Agreement (PA) will be followed for these six buildings and the CE Facility.

In accordance with the PA Arnold AFB signed with the SHPO in 2003 (N.A., 2003), before any demolition activities take place, the SHPO would be notified and information would be provided to the SHPO on the facility being considered for demolition. As part of the consultation process, Arnold AFB would furnish to the SHPO information that would include a detailed narrative about the historical nature of the facility, a narrative delineating the operational or developmental imperative for the demolition, alternatives to demolition, a photographic/drawings record of the facility proposed for demolition, and a signed agreement document containing stipulations for the resolution of the project's adverse effect upon historic properties. Arnold AFB is currently in discussions with the SHPO to update the PA.

The individual component projects are scheduled to be implemented by FY 2009. The specific components of the Proposed Action are described below.

2.1.1 Demolition Projects

Demolition projects are described below and locations are presented on Figures 2-1 and 2-2.

2.1.1.1 Facility Demolition Project #1

The Lumber Storage Building, project # ANZY010067K, was constructed in 1957. The primary purpose of this 1,200-square-foot facility is to provide space for lumber storage for Base operations. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.2 Facility Demolition Project #2

The CE Fabrication Shop, project # ANZY010067F, was constructed in 1970. The primary purpose of this 2,400-square-foot facility was for sand-blasting/fabrication activities for the Base. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.3 Facility Demolition Project #3

The Natural Resources Building, project # ANZY010067G, was constructed in 1957. The primary purpose of this 800-square-foot facility was to provide space for natural resource and forestry activities that supported the Base. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.



Legend



Buildings scheduled for demolition



0 125 250 500 Feet




Figure 2-1

Proposed Demolition Locations - Northern

Base-Wide Building Demolition
Final Environmental Assessment



Legend

 Buildings scheduled for demolition

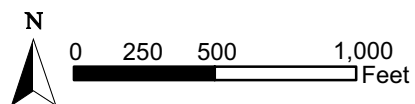


Figure 2-2

Proposed Demolition Locations - Southern

Base-Wide Building Demolition
Final Environmental Assessment

2.1.1.4 Facility Demolition Project #4

The Salt Storage Building, project # ANZY010067M, was constructed in 1962. The primary purpose of the 5,729-square-foot facility was to provide space for salt storage. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.5 Facility Demolition Project #5

The Administration Building, project # ANZY010067B, was constructed in 1978. The primary purpose of this 12,320-square-foot facility was to serve as an office building. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.6 Facility Demolition Project #6

The ETF-B Exhauster, project # ANZY049291, was constructed in 1953. The primary purpose of this 46,593-square-foot facility was to serve as an ETF. The ETF-B Exhauster is considered potentially eligible for the NRHP. Specific information including NRHP eligibility criteria are provided in Table 3-1. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. This is one of the earliest technical buildings completed at AEDC and has served as a critical component of the ETF-A complex since its completion. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.7 Facility Demolition Project #7

The ETF-A Airside, project # ANZY049238, was constructed in 1956. The primary purpose of this 22,141-square-foot facility was to serve as an ETF. The ETF-A Airside is considered potentially eligible for the NRHP. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. This building, one of the earliest completed at AEDC, has served the ETF-A as an air supply building since its completion. The building also displays aesthetic characteristics similar to those of other buildings constructed at AEDC during the 1950s and 1960s. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.8 Facility Demolition Project #8

The ETF-A Exhauster, project # ANZY049240, was constructed in 1957. The primary purpose of this 10,357-square-foot facility was to serve as an ETF. The ETF-A Exhauster is considered potentially eligible for the NRHP. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. This building, one of the earliest completed at AEDC, has continuously served the ETF-A complex as an exhauster building. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.9 Facility Demolition Project #9

The ETF-A Reefer, project #ANZY049239, was constructed in 1967. The primary purpose of this 13,122-square-foot facility was to serve as an ETF. The ETF-A Reefer is considered potentially eligible for the NRHP. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.10 Facility Demolition Project #10

The CE Facility, project #ANZY010067N, was constructed in 1952. The primary purpose of this 57,260-square-foot facility was for Engineering and I&M. The CE Facility is considered potentially eligible for the NRHP. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. This building, one of the earliest completed at AEDC, has served AEDC continuously as the CE Administration Building. Similar to other buildings completed during the 1950s and 1960s, this building displays physical characteristics that link it to the overall aesthetic appearance of the installation. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.11 Facility Demolition Project #11

The Rocket Storage Building, project #ANZY059003, was constructed in 1963. The primary purpose of this 256-square-foot facility was to provide space for rocket storage. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.12 Facility Demolition Project #12

The VKF Tunnel M Control Building, project #ANZY010067I, was constructed in 1966. The primary purpose of this 322-square-foot facility was for the VKF operations. The VKF Tunnel M Control Building is considered potentially eligible for the NRHP. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. Demolition of this facility would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.13 Facility Demolition Project #13

The VKF Vaporizer Control Building, project #ANZY010067J, was constructed in 1955. The primary purpose of this 144-square-foot facility was to provide space for the VKF operations. Demolition would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.1.1.14 Facility Demolition Project #14

The PWT Test Fuel Building, project # ANZY010067P, was constructed in 1958. The primary purpose of this 1,593-square-foot facility was to provide space for PWT tests. The PWT Test Fuel Building is considered potentially eligible for the NRHP. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and

would be prepared in consultation with the SHPO. Demolition of this facility would include asbestos and lead-based paint removal, hazardous waste disposal, utilities capping, and grounds restoration.

2.2 No-Action Alternative

The No-Action Alternative would be not to implement the components of the Proposed Action. Failure to remove the old structures would result in continued deterioration of those structures and would place limitations on use of lands currently occupied by the buildings. The No-Action Alternative would not be consistent with the military mission of Arnold AFB.

2.2.1 Comparison of Alternatives Carried Forward

The Proposed Action and the No-Action Alternative are compared in Table 2-1.

TABLE 2-1
Comparison of Impacts of Considered Alternatives
Base-Wide Building Demolition Final EA

Resource Area	Proposed Action	No-Action Alternative
Land Use	Change in land use from "building" to semi-improved grounds. Short-term impacts from conversion to semi-improved grounds. Conversion of lands would not change management practices for the Base. Added benefit would include land for future Base expansion.	No Impacts.
Geomorphology	Potential for short-term disturbance of soils during demolition activities. Soils would be stabilized following demolition and semi-improved via grading and best management practice (BMP) implementation. Sites are on lands previously cleared and graded.	No Impacts.
Hydrology	A short-term increase in runoff could occur during construction and demolition. Onsite BMPs would control runoff to avoid/minimize impacts during and immediately following demolition activities.	No Impacts.
Water Quality	Potential for increased sedimentation and pollutant loading from stormwater runoff during demolition. Use of appropriate stormwater pre- and post-demolition stormwater BMPs would minimize impacts.	No impacts.
Safety and Occupational Health	No Impacts. Adherence to Occupational Safety and Health Administration (OSHA) requirements would minimize exposure to lead- and asbestos-containing materials and limit accidents onsite.	No Impacts.
Noise	Demolition-related noise would be generated intermittently during the project.	No Impacts.
Air Quality	Fugitive dust would be generated during demolition.	No Impacts.
IRP and Hazardous Materials	Minor impacts would occur. During demolition of buildings, there is the potential for exposure to lead-based paint, asbestos, and contaminated soils associated with IRP sites. Soil exposure would be minimized through use of appropriate containment and disposal measures. Additionally, removal of lead- and asbestos-containing materials would be conducted in accordance with DoD and USAF guidance. Previous surveys would be examined prior to demolition to evaluate issues related to IRP areas or hazardous waste. If hazardous wastes are discovered during demolition activities, the appropriate remedial actions would be taken during the demolition process.	No Impacts.
Cultural Resources	Adverse impacts to the ETF-B Exhauster, ETF-A Airside, ETA-A Exhauster, ETF-A Reefer, CE Facility, VKF Tunnel M Control Building and PWT Test Fuel Building would occur. Coordination with SHPO would resolve these issues. No impacts to other cultural resources would occur.	No Impacts.
Traffic Flow	Short-term demolition related traffic delays. Facilities would be demolished on a schedule from 2005-2009 and traffic flow would be based on an agreed-upon schedule. Manual traffic control would be provided as a project design feature to minimize the disruption and inconvenience	No Impacts.
Utility Infrastructure	Short-term, temporary demolition related utility disruptions. Minor impacts to solid waste disposal capacity from demolition.	No impacts.

3.0 Affected Environment

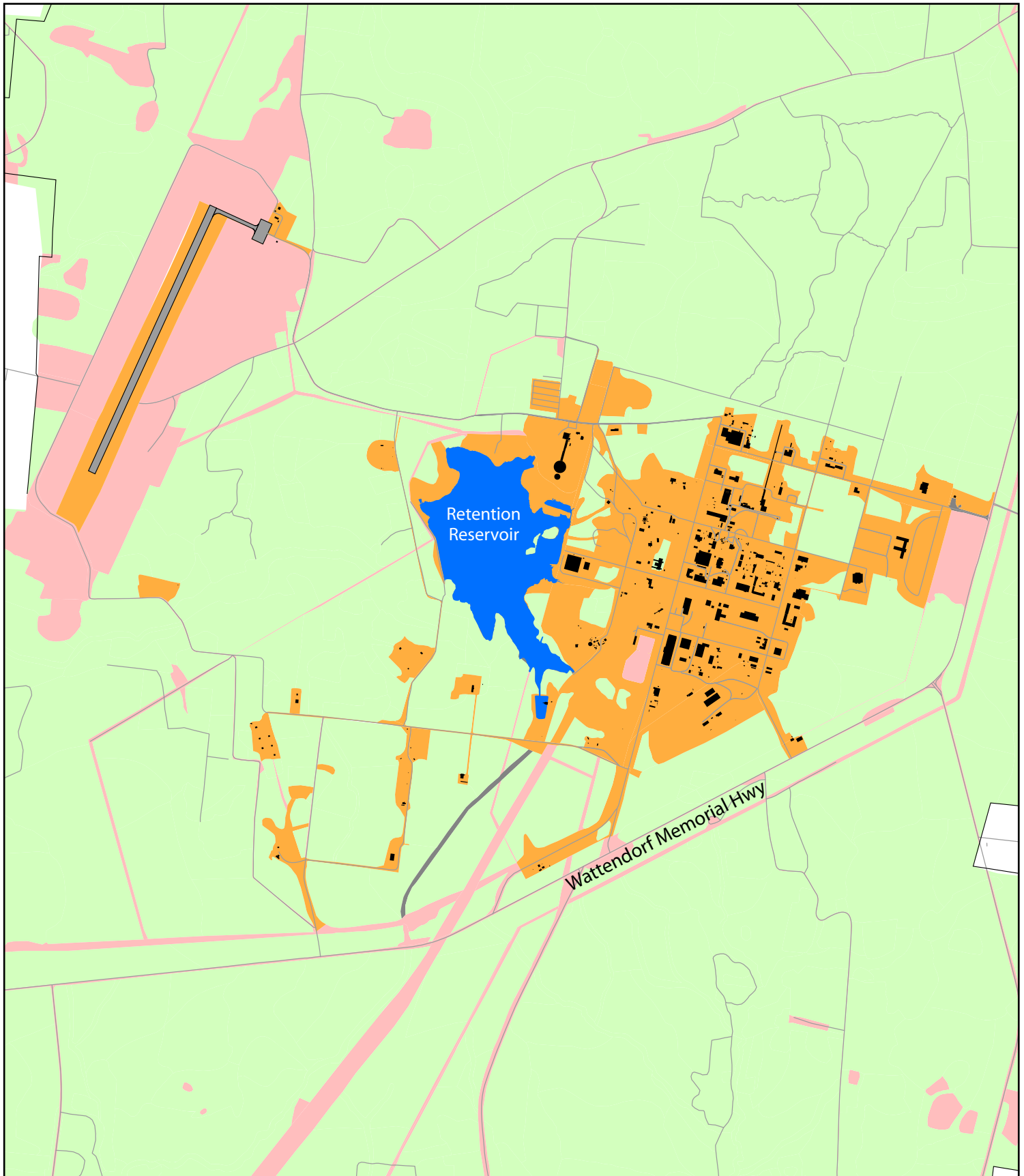
3.1 Land Use

Arnold AFB occupies 39,081 acres including the 3,632-acre Woods Reservoir. Woods Reservoir provides cooling water and drinking water for facilities in the industrial area. Cultivated pine forests total approximately 5,785 acres and hardwood forests total 23,492 acres. There are grasslands and early-successional habitats in utility ROWs that occupy roughly 1,479 acres on the installation and provide habitat for numerous rare species. In addition, 4,683 acres of the installation are occupied by wildlife food plots, buildings/structures, mowed/bush-hog areas, and other open areas, such as landfills, roads, etc. (Call, 2003). Three types of land use classifications have been defined at the Base: unimproved, semi-improved, and improved. Less than 1 percent (<36 acres) of Arnold AFB lands are improved grounds. These areas, which include administrative and industrial areas, housing areas, and athletic fields, require intensive maintenance such as regular mowing. An additional 2 percent (73 acres) of the Base consists of semi-improved grounds. These areas require periodic maintenance and include road ROWs and clear zones. Twelve percent (436 acres) of Arnold AFB's property consists of paved areas, structures, or water. The remaining lands are considered unimproved and include forest and agricultural lands (AEDC, 2004). These lands include cultivated pine forests totaling approximately 5,785 acres and hardwood forests totaling 23,492 acres. Grasslands and early-successional habitats in utility ROWs occupy roughly 1,479 acres on the installation and provide habitat for numerous rare species (Call, 2003).

Much of the land within the AEDC complex has already been developed. Forty-seven percent of the land has been developed within the security area. Within this developed area 33 percent is improved grounds, 14 percent is semi-improved grounds, and 53 percent is unimproved grounds. Specific land use classifications are shown in Figure 3-1. Remaining areas that are considered developable are those within the AEDC complex that are not currently occupied by buildings or pavement. Absent redevelopment of areas that currently support mission components, any future development within AEDC would have to be done on these developable lots.

3.2 Geomorphology

A detailed discussion of the geomorphology on Arnold AFB was presented in *Final Environmental Assessment: Proposed Fiscal Year 2004 Harvest of Pine and Hardwood Pulpwood/Sawtimber, Arnold AFB, Tennessee* (CH2M HILL, 2004). The topography at Arnold AFB ranges from relatively flat with poor surface drainage in the northern portion of the installation to moderately rolling with defined stream channels in the southern section.



Legend

- Road Centerline
- ▭ Arnold AFB Boundary
- ▭ Airfield
- ▭ Buildings
- ▭ Improved 33%
- ▭ Semi-improved 14%
- ▭ Unimproved 53%



0 0.25 0.5 Miles



Figure 3-1

Land Use on Arnold Air Force Base
 Base-Wide Building Demolition
 Final Environmental Assessment

The buildings proposed for demolition are located primarily within the main part of the industrial complex (Figures 2-1 and 2-2). At each building location, soils within the building footprint and the immediate surrounding area were cleared, grubbed, and graded to prepare the sites for construction. Soils would have been compacted and may have had fill material added to support foundations. Soils at the sites of the buildings proposed for demolition would now be considered disturbed rather than as the native soil type for the area.

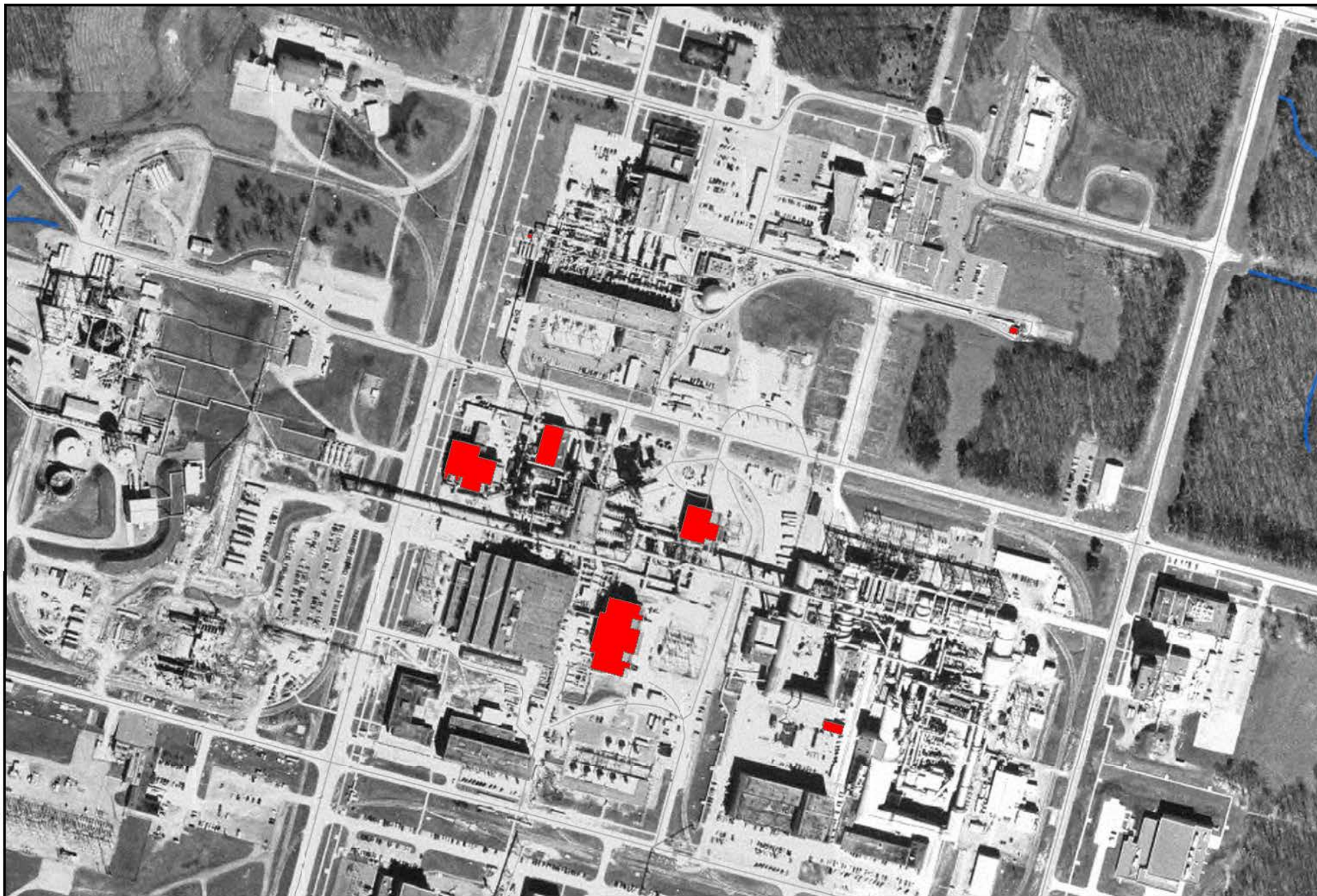
3.3 Hydrology

Hydrological features include surface waters (lakes, rivers, streams, and springs) and groundwater. Arnold AFB lies within the Duck River and the Elk River basins. The drainage divide between these two watersheds extends southwest to northeast through the AEDC industrial area. The Duck River basin lies to the north of the divide and receives drainage from Hunt, Huckleberry, Wiley, Crumpton, and Bobo Creeks and the Hickerson Spring Branch. The Elk River basin is to the south of the divide and collects surface drainage, primarily from Bradley, Brumalow, and Rowland Creeks. Smaller creeks such as Dry Creek, Hardaway Branch, Saltwell Hollow Creek, Spring Creek, and Poorhouse Creek also contribute to the Elk River (Call, 2003).

No streams are located within the areas where demolition activities would occur (Figures 3-2 and 3-3). An unnamed tributary of Brumalow Creek originates near the Lumber Storage Building and the Salt Storage Building, and an unnamed tributary of Crumpton Creek originates near the Rocket Storage Building (Figure 3-2). No other buildings are within 250 feet of any surface water. There is a potential that stormwater runoff may affect streams during the demolition of the Lumber Storage Building, the CE Fabrication Shop, the Natural Resources Building, the Salt Storage Building, the Administrative Building, and the CE Facility. To avoid the potential impacts from demolition stormwater runoff into nearby streams, standard construction/demolition BMPs would limit runoff to adjacent land (Figure 3-3). Regional groundwater resources include the Mississippi Carbonate (karst) aquifer (recently named Highland Rim aquifer). This aquifer consists of flat-lying carbonate rocks of Mississippian age and underlies the Highland Rim physiographic province. The western part of this area is dissected and hilly to steep, whereas land in the eastern, northern, and southern parts of this province is predominantly undulating. The bedrock formations have a deep (up to 100 feet thick) chert regolith that stores groundwater and releases it to bedrock openings. There are fractures in the bedrock, which permit rapid transmission of water. Well yields commonly range from 5 to 50 gallons per minute (Tennessee Department of Environment and Conservation [TDEC], 2002a).

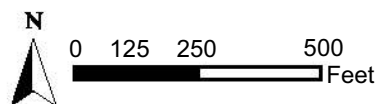
Karst areas are characterized by sinkholes, springs, disappearing streams and caves, and rapid, highly directional groundwater flow in discrete channels. Since water can travel rapidly over long distances through conduits that lack natural filtering processes of soil and bacteria, karst systems are easily contaminated.


Floodplains have been defined at several locations on Arnold AFB. These areas are located near Sinking Pond and the inlet to Woods Reservoir, more than 2,000 feet from the proposed demolition sites, and would not be impacted by the Proposed Action.

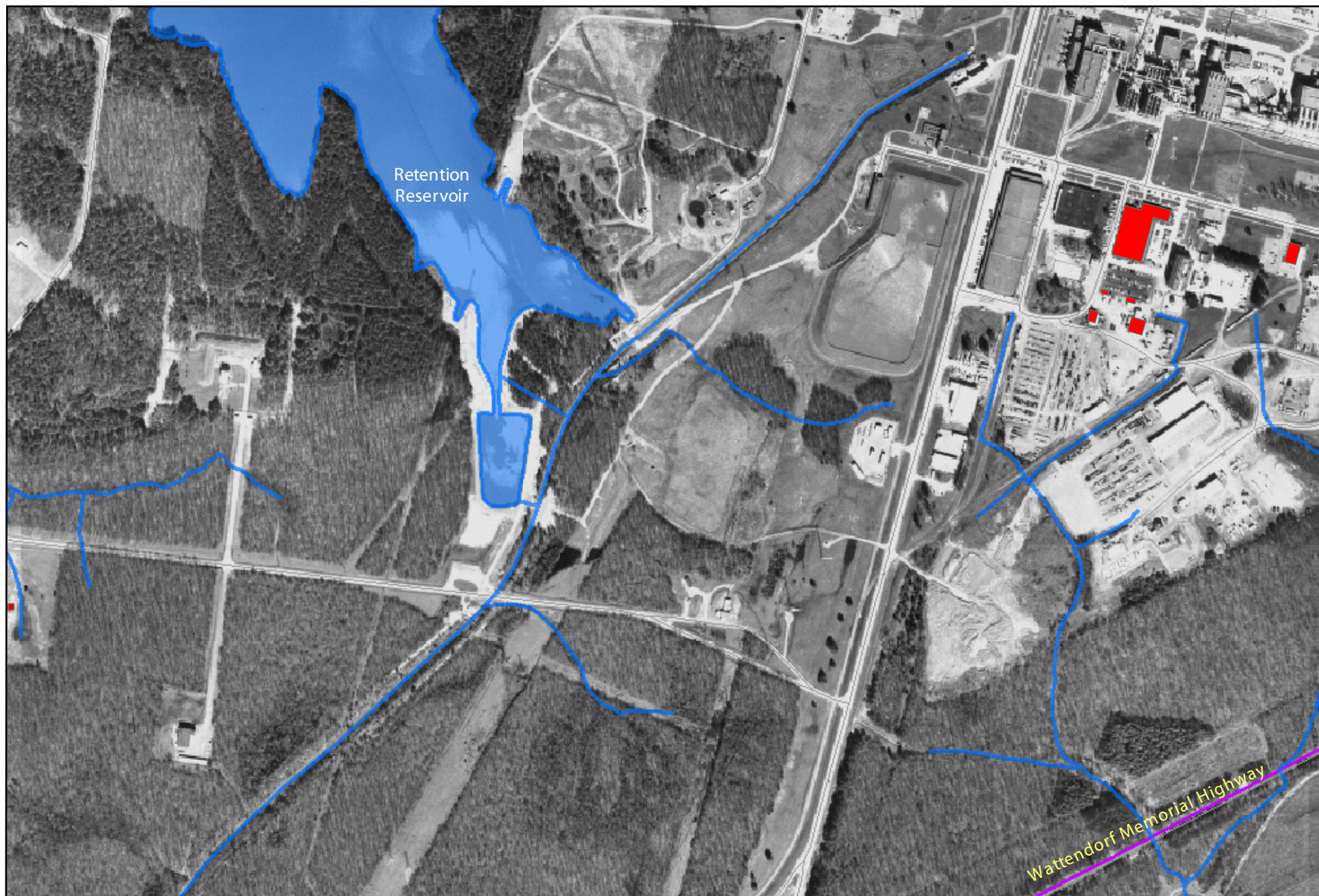


Legend

- Buildings scheduled for demolition
- Streams




 Figure 3-2
Streams near Proposed Demolition Locations - Northern
*Base-Wide Building Demolition
 Final Environmental Assessment*



Legend

- Buildings scheduled for demolition
- Streams



Figure 3-3
Streams Near Proposed Demolition Locations - Southern
Base-Wide Building Demolition
Final Environmental Assessment

3.4 Water Quality

Arnold AFB is located in two watersheds, with the divide between the Upper Elk River and the Duck River basins generally following the middle of the Base. Within the Duck River basin, only two streams (the Duck River and the Little Duck River) do not fully meet their designated uses. Both have elevated bacteria levels near the City of Manchester, attributed to failing sewage collection systems within the city and general urban runoff (TDEC, 2002b).

The Upper Elk basin has 22 water bodies on the Final Version of the 2004 Section 303(d) Report (TDEC, 2004). Woods Reservoir, located in the project area, is listed as not supporting its designated uses because of polychlorinated biphenyl (PCB) impairment of sediments resulting from historical PCB releases from AEDC into Woods Reservoir. A No Consumption-General Public (NCGP) fishing advisory has been issued for catfish (TDEC, 2002b).

As discussed in Section 3.3, there are no surface waters within any of the proposed demolition sites and only two streams are within 250 feet of any of the sites. All proposed demolition sites except the Rocket Storage Building are within the AEDC industrial complex and are connected to the AEDC stormwater control system, including storm sewers that direct the majority of runoff into the retention reservoir. Floatable solids are skimmed into the skimming lagoon. During major stormwater events, stormwater could exceed the pumpbacks at Brumalow and Bradley Creeks and stormwater could flow into Woods Reservoir.

3.5 Safety and Occupational Health

The Air Force Safety Center develops Air Force Environmental and Occupational Safety and Health (AFOSH) standards. These standards implement OSHA rules directed by DoDI 6055.1 and AFI 91-302. The Center also develops other guidance to supplement the AFOSH standards and ensure their availability at the supervisor and worker level. The goal is to ensure that guidance is in compliance with OSHA and other federal standards and to incorporate "lessons learned" and appropriate parts of consensus standards to provide the supervisors and workers with the tools necessary to prevent mishaps (USAF, 2004). The Safety/Health Group and the Environmental Group are responsible for environmental and occupational safety at Arnold AFB. This team ensures that workers are informed about potential hazards from chemicals and materials that may be encountered on the Base, assuring that work areas have proper lighting and ventilation for tasks to be performed. Additional components include ongoing program evaluations for noise, ergonomics, hazard communication, personal protective equipment (including respiratory protection), and emergency response.

3.6 Noise

"Noise," in the context of this analysis, refers to sounds generated by activities that may affect employees of the Base, on-Base residents, residents of off-Base areas, or wildlife. Noise levels typically are expressed in terms of decibels (dB), a measure of the sound pressure generated. The decibel scale is logarithmic rather than linear because humans perceive

sound as the logarithm of the sound pressure rather than the actual sound pressure (Danish Wind Industry Association, 2003).

For determination of impacts to human receptors, noise measurements are weighted to increase the contribution of noises within the normal range of human hearing and decrease the contribution of noises outside the normal range of human hearing. For humans, this is considered an A-weighted scale (dB_a). When sound pressure doubles, the dB_a level increases by 3. Psychologically, most humans perceive a doubling of sound as an increase of 10 dB_a (Danish Wind Industry Association, 2003). Sound pressure decreases with distance from the source. Typically, the amount of noise is halved as the distance from the source doubles (Danish Wind Industry Association, 2003).

Additionally, people tend to exhibit differing sensitivity to noises generated by time of day, with noise at night being more disturbing than daytime noise. Therefore, a Day-Night Average Noise Level (LDN) is used to determine whether noise would be perceived as an adverse impact. USEPA developed an index as a standard descriptor for noise impacts from a variety of sources. Where LDN values exceed 65 dB_a, residential development is not recommended.

Noise levels in typical urban residential areas range from 58 dB_a to 72 dB_a (U.S. Army Corps of Engineers [USACE], 1998). Noise levels in suburban neighborhoods are typically around 50 dB_a to 60 dB_a (dB Engineering, 2004). A quiet office or rural home typically has a noise level of approximately 40 dB_a (League for the Hard of Hearing, 2004).

Several of the test facilities recommended for demolition contribute noise levels to the surrounding environment. Demolition of these test facilities would eliminate noise in the surrounding environment. Noise levels that would be eliminated for each test facility after the buildings are removed are summarized below.

- ETF-B Exhauster. During operation from 1953 to the present, this facility has typically produced noise levels between 57 to 120 dB_a depending on what type of testing was being conducted onsite.
- ETF-A Airside. During operation from 1956 to the present, this facility has typically produced noise levels between 55 to 122 dB_a depending on what type of testing was being conducted onsite.
- ETF-A Exhauster. During operation from 1957 to the present, this facility has typically produced noise levels between 55 to 115 dB_a depending on what type of testing was being conducted onsite.
- ETF-A Reefer. During operation from 1967 to the present, this facility has typically produced noise levels between 55 to 95 dB_a depending on what type of testing was being conducted onsite.
- VKF Tunnel M Control Building. During operation from 1966 to the present, this facility has typically produced noise levels between 55 to 80 dB_a depending on what type of testing was being conducted onsite.

- VKF Vaporizer Control Building. During operation from 1955 to the present, this facility has typically produced noise levels between 55 to 108 dBA depending on what type of testing was being conducted onsite.
- PWT Test Fuel Building. During operation from 1958 to the present, this facility has typically produced noise levels between 55 to 115 dBA depending on what type of testing was being conducted onsite.

3.7 Air Quality

Arnold AFB is located in the Tennessee Valley--Cumberland Mountains Interstate Air Quality Region, which occupies portions of Alabama and Tennessee. Although activities at Arnold AFB result in various sources and volumes of air emissions, the regional air quality is good. Arnold AFB is located in an attainment zone for all pollutants (CH2M HILL, 2002). Air pollutants are emitted from mobile and stationary sources and general maintenance activities, government and privately owned vehicles, jet engine testing, aircraft operations, prescribed burning, wildfires, and mission test and training operations (USAF, 2000b). The Tennessee Air Pollution Control Board of TDEC issued AEDC a Title V Operating Permit in May 2002. There are currently 26 emission sources covered under this permit, and all are in compliance.

Since Arnold AFB is within an attainment area for all criteria pollutants, major new or modified stationary sources on and in the area of Arnold AFB are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant deterioration of regional air quality. A major new source is defined as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds: 100 or 250 tons/year based on the source's industrial category.

3.8 IRP and Hazardous Materials




Arnold AFB has an active IRP designed to protect human health and the environment and to restore areas for future use. Arnold AFB executes the IRP in consultation with TDEC in accordance with CERCLA and RCRA. Twenty-six IRP sites have been identified on Arnold AFB, 11 of which have been closed after determinations of no further action required. IRP areas near proposed demolition activities are shown in Figures 3-4 and 3-5.

There are two active and three closed landfills on Arnold AFB. The Asbestos and Construction and Demolition Debris (C&D) Landfills are currently in use, while the Coffee County, the Sanitary, and the C&D Landfills have been filled and closed. The Sanitary Landfill was reclassified in 1991 as an Industrial Landfill and is commonly referred to as the "Old Asbestos Landfill" (AEDC, 2005).

Solid waste is generated by normal work activities. These activities include office type work, commercial activities, shop work, and industrial activities. Waste is transported to a commercially operated transfer station, consolidated, and transported to a sanitary landfill for disposal.



Legend

-  Buildings scheduled for demolition
-  IRP Sites
-  Streams



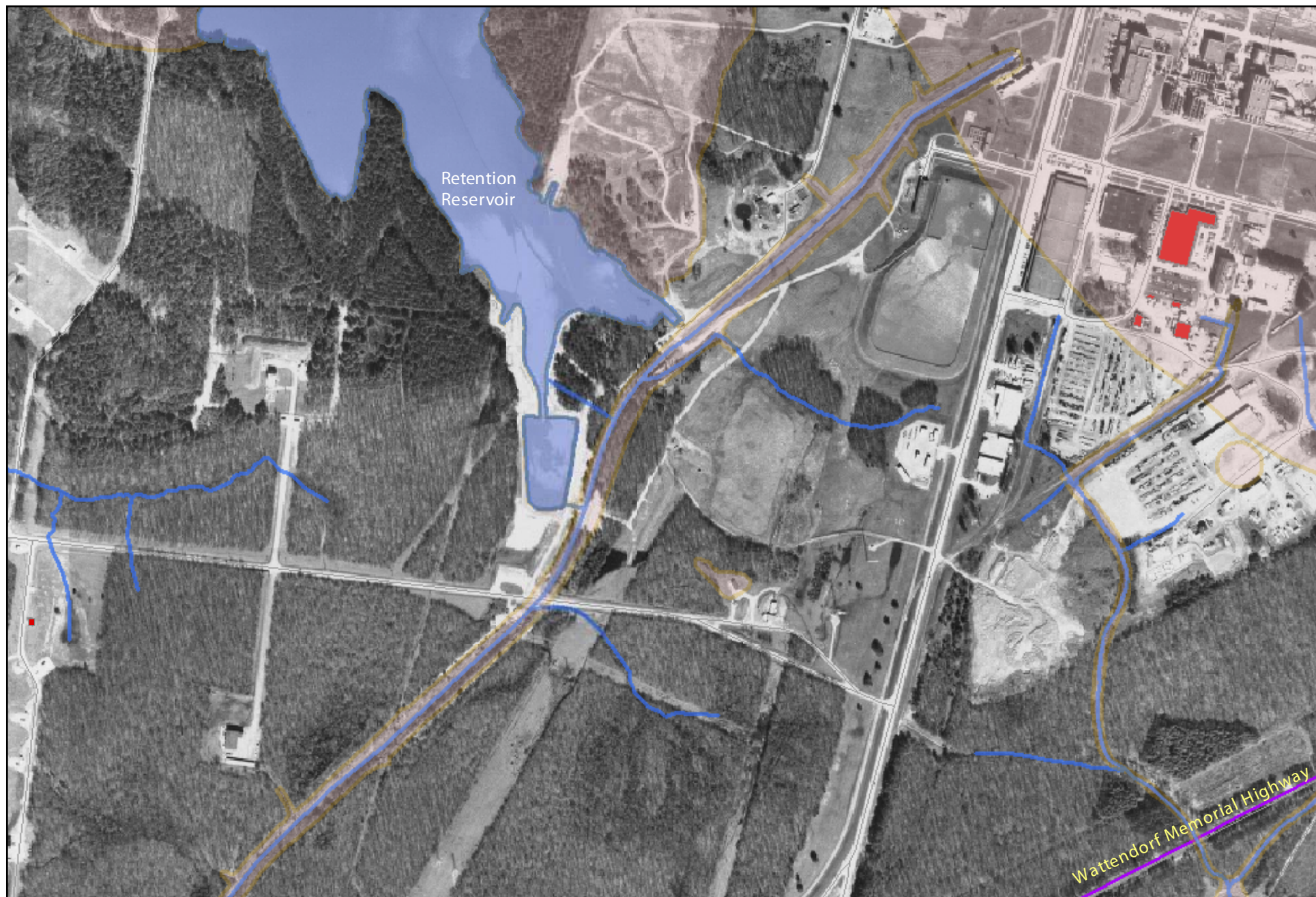
0 125 250 500
Feet



Figure 3-4

IRP Sites Near Proposed Demolition Locations - Northern

Base-Wide Building Demolition
Final Environmental Assessment



Legend

- Buildings scheduled for demolition
- IRP Sites
- Streams



0 125 250 500
Feet



Figure 3-5
IRP Sites Near Proposed Demolition Locations - Southern
*Base-Wide Building Demolition
 Final Environmental Assessment*

Solid wastes at the transfer station are transported to the Middle Point Landfill located in Murfreesboro, Tennessee. Some “approved” special wastes from AEDC are also transported to this facility. The Middle Point Landfill is a Class I landfill under Tennessee classifications and meets all Subtitle D landfill requirements including a composite liner, landfill gas control, and a leachate collection and removal system. It is authorized by the State of Tennessee under Permit No. SNL 75-102-0219.

The C&D Landfill is located within the secured area of the Base and is not accessible to unauthorized personnel. The C&D Landfill is located along Perimeter Road and occupies approximately 20 acres. On 13 February 1990, TDEC issued authorization for AEDC to begin using this landfill for disposal of demolition type waste. The landfill registration number issued is DML-16 102 0027. A permit modification to authorize and approve a plan for closure and post-closure care was issued on 28 June 1993. No variances or waivers are approved.

Waste is placed into an excavated trench. As a trench is filled, a new trench is excavated and soil from the second trench is used for cover material. Two trenches have been filled since the landfill began operation in 1990. Waste is currently being accepted in the third trench. Since this trench will soon be filled, efforts to open a fourth trench this calendar year (CY) are underway.

Asbestos and asbestos-containing material (containing greater than 0.1 percent by weight asbestos) that is not hazardous waste and contains no free liquid may be disposed in the Base Asbestos Landfill. “No free liquid” means that if the paint filter test were applied to the material, no liquid would pass through the filter. The Asbestos Landfill is located adjacent to the C&D Landfill and is dedicated to asbestos waste from the Base. Because asbestos waste deliveries are relatively infrequent, the Asbestos Landfill is only open when needed. Cells, rather than trenches, are used for asbestos disposal. An arrangement of 20-by 20-foot cells on a grid system allows the Base to maintain very accurate records of waste placement. Asbestos waste is covered with 12 inches of soil immediately after placement. The Asbestos Landfill is similar to the C&D Landfill in terms of access control, restricting prohibited waste, and general maintenance. On 2 December 1992, TDEC issued authorization for AEDC to begin using this landfill for disposal of asbestos waste. Use of the Asbestos Landfill began in March 1994 (landfill registration IDL-16 102 0081).

Base-generated hazardous waste that is collected is stored in permitted storage facilities at the AEDC Initial Accumulation Points (IAPs) located at the Old Salvage Yard, ODC Center, Base CE Chemical and Metallurgical Building, and Instrument Calibration Laboratory. Hazardous waste is stored for 90 days at these areas until they are transported to offsite disposal and holding areas. The 90-day storage areas on Arnold AFB are located at CL-ACCS (Accumulation Site), PWT-ACCS, MP-ACCS and the Treatment, Storage, and Disposal Facility (TSDF). At the 90-day mark, the hazardous wastes are transported to a regulated storage facility offsite (AEDC, 2004).

3.9 Cultural Resources

Section 106 of the NHPA requires that federal agencies analyze the impacts of federal activities on historic properties. Areas potentially impacted by mission activities are surveyed as part of the AF Cultural Resources Management Program.

Surveys conducted on Arnold AFB have identified 107 prehistoric and historic sites dating back to Early Archaic times (Hajic et al., 2002). These include 40 prehistoric sites, 55 historic sites, and 12 mixed prehistoric and historic sites. Of these 107 sites, 6 have been deemed eligible for listing on the NRHP and 40 are considered potentially eligible (R. Alvey, personal communication, 2004). The prehistoric sites include open habitations, isolated projectile points/knives, and a midden mound. The historic sites include the remains of houses, outbuildings, wells, cemeteries, and trash dumps (Call, 2003). Due to the sensitive nature of these sites, their exact locations are undisclosed.

A total of 722 buildings, structures, and objects, are included on the Arnold AFB Real Property List. Of the 722 resources, 563 within the boundary of the Base were built during or before 1989 (the accepted date for the end of the Cold War) (Hajic et al., 2002). Several reports have been completed regarding historic resources at Arnold AFB. Previous reports assessed six large technical complexes within the AEDC. The *Draft Historic Building Inventory and Evaluation (Draft Study) prepared by Geo-Marine Inc. (January 2005)* concentrates on those six complexes, expands the assessment to the Aeropropulsion Systems Test Facility (ASTF), and assesses the potential for historic landscapes.

Seven of the 14 facilities considered for demolition are considered potentially eligible for the NRHP. These facilities include: ETF-B Exhauster, the ETF-A Airside, the ETF-A Exhauster, the ETF-A Reefer, the VKF Tunnel M Control Building, the PWT Test Fuel Building, and the CE Facility. Procedures in the 2003 Programmatic Agreement (PA) will be followed for these seven buildings/facilities.

Specific information on each of these facilities is provided below and also in Table 3-1.

The ETF-B Exhauster, project #ANZY049291, was constructed in 1953. The primary purpose of this 46,593-square-foot facility was to serve as an ETF. The ETF-B Exhauster may be eligible for the NRHP under NRHP Criteria A, B, and C. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. This facility is one of the earliest technical buildings completed at AEDC and has served as a critical component of the ETF-A complex since its completion. In addition, having a flat roof and a lower brick façade with an upper façade of corrugated metal, this facility is linked aesthetically to several other buildings constructed at AEDC during the 1950s and 1960s.

TABLE 3-1
Buildings Proposed for Demolition
Base-Wide Building Demolition Final EA

Number of Buildings	Use	Project Number	Year Constructed	NR Eligibility Criterion
1	Lumber Storage Building	ANZY010067K	1957	
2	CE Fabrication Shop	ANZY010067F	1970	
3	Natural Resources Bldg	ANZY010067G	1957	
4	Salt Storage Bldg	ANZY010067M	1962	
5	Admin. Building	ANZY010067B	1978	
6	ETF-B Exhauster	ANZY049291	1953	A, B, C
7	ETF-A-Airside	ANZY049238	1956	A, B, C, G
8	ETF-A Exhauster	ANZY040240	1957	A, B, C, G
9	ETF-A Reefer	ANZY049239	1967	A, C, G
10	CE Facility	ANZY010067N	1952	A, B, C
11	Rocket Storage	ANZY059003	1963	
12	VKF Tunnel M Control Bldg	ANZY010067I	1966	A, C, G
13	VKF Vaporizer Control Bldg	ANZY010067J	1955	
14	PWT Test Fuel Bldg	ANZY010067P	1958	A, B, C, G

Source: Draft Report: Historic Building and Associated Landscape Inventory and Evaluation, Arnold AFB, Tennessee, 2005.

^aNRHP Criteria are defined by the National Park Service, generalized definitions are as follows:

A: Criterion A—Historical Associations- properties are associated with a significant historical event (e.g., Cold War)

B: Criterion B—Association with Persons of Significance (e.g., General Henry H. “Hap” Arnold, Dr. Theodore Von Kármán, and Dr. Frank Wattendorf are noteworthy for their contributions to the field of aeronautical science).

C: Criterion C – Aesthetics, Design, and Architecture Facilities embody distinctive characteristics of a type, period, or method of construction. Many of the administrative facilities (both within and adjacent to the test complex area) strongly share architectural design elements (International style elements) as well as the same building materials (brick or brick veneer, concrete, metal, metal-framed windows).

G: Criterion Consideration G Exceptional Importance: For properties to be eligible for listing under this criterion, they must possess exceptional significance.

The ETF-A Airside, project # ANZY049238, was constructed in 1956. The primary purpose of this 22,141-square-foot facility was to serve as an ETF. The ETF-A Airside may be eligible for the NRHP under NRHP Criteria A, B, and C and Criteria Consideration G. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. This building, one of the earliest completed at AEDC, has served the ETF-A as an air supply building since its completion. As well also the building displays aesthetic characteristics similar to those of other buildings constructed at AEDC during the 1950s and 1960s.

The ETF-A Exhauster, project # ANZY049240, was constructed in 1957. The primary purpose of this 10,357-square-foot facility was to serve as an ETF. The ETF-A Exhauster may be eligible for the NRHP under NRHP Criteria A, B, and C and Criteria Consideration G. Documentation of this building, to mitigate its demolition, would follow the requirements

found in the PA and would be prepared in consultation with the SHPO. This building has continuously served the ETF-A complex as an exhauster building.

The ETF-A Reefer, project #ANZY049239, was constructed in 1967. The primary purpose of this 13,122-square-foot facility was to serve as an ETF. The ETF-A Reefer may be eligible for the NRHP under NRHP Criteria A and C and Criteria Consideration G. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO.

The CE Facility, project #ANZY010067N, was constructed in 1952. The primary purpose of this 57,260-square-foot facility was for Engineering and I&M. The CE Facility may be eligible for the NRHP under NRHP Criteria A, B, and C. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. This building, one of the earliest completed at AEDC, has served AEDC continuously as the CE Administration Building. Similar to other buildings completed during the 1950s and 1960s, this building displays physical characteristics that link it to the overall aesthetic appearance of the installation.

The VKF Tunnel M Control Building, project #ANZY010067I, was constructed in 1966. The primary purpose of this 322-square-foot facility was for the VKF operations. The VKF Tunnel M Control Building may be eligible for the NRHP under NRHP Criteria A and C and Criteria Consideration G. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. The building was part of the AEDC industrial complex and contains the control system for the now-inactive Tunnel N. Currently decommissioned, this small building is similar to the ETF Rocket Test Control Building (Rocket Propulsion Lab) and the ETF Rocket Engine Test Stand (Propulsion Engine Test Stand) in that it represents one of the earliest AEDC scientific facilities constructed at the installation.

The PWT Test Fuel Building, project # ANZY010067P, was constructed in 1958. The primary purpose of this 1,593-square-foot facility was to provide space for PWT tests. The PWT Test Fuel Building may be eligible for the NRHP under NRHP Criteria A, B, and C and Criteria Consideration G. Documentation of this building, to mitigate its demolition, would follow the requirements found in the PA and would be prepared in consultation with the SHPO. The building is a critical component of the PWT complex.

Pre-dating Arnold AFB, Camp Peay occupied a 1,040-acre tract in the southwest portion of the present Base. It was established in 1926 as a Tennessee National Guard camp. Subsequently, Camp Forrest was founded in 1941, also predating Arnold AFB. Located mostly within present Base boundaries and encompassing 85,000 acres, it was one of the nation's largest training centers just before World War II. Approximately 22,000 prisoners of war were housed here, representing a number of nationalities, including resident aliens, Germans, and Italians (TRC Garrow Associates et al., 2001). After the war ended, Camp Forrest was declared a surplus property and the buildings and support systems were dismantled and sold (TRC Garrow Associates et al., 2001). There are four surviving structures associated with Camp Forrest: two small concrete utility buildings of unknown use, a former brick jail, and a cold storage building. These resources were recommended as ineligible for the NRHP due to loss of integrity and loss of context caused by the removal of Camp Forrest (TRC Garrow Associates et al., 2001).

3.10 Traffic Flow

The Base road network consists of approximately 105 miles of improved roads with about 50 percent made of gravel and 50 percent constructed of asphalt and concrete. There are 205,000 square yards of parking lots including over 5,000 parking spaces. About 70 percent of the lots are asphalt, 25 percent are stone, and 5 percent are concrete (AEDC, 2004). Within the AEDC industrial complex, existing roads are sufficient to accommodate traffic flow of the workforce and delivery of materials and supplies. The Main Gate and Gate No. 2 are open to allow ingress and egress of traffic. Streets are arranged to provide easy access to all buildings and parking areas.

3.11 Utility Infrastructure

Utility infrastructure on Arnold AFB includes the water supply system, cooling water system, sanitary sewer system, stormwater drainage system, natural gas system, electrical distribution system, steam system, and solid waste system.

3.11.1 Water Supply System

Raw water is pumped from Woods Reservoir to a secondary reservoir in the AEDC complex via a 60-inch water main. The secondary reservoir supplies the Base water treatment plant and the cooling water system. Treated potable water is stored in two clear wells and an elevated tank. The water distribution system is a 13-mile looped grid of 6- to 12-inch mains that supply the AEDC property. Other areas of the Base, including the Family Camping Area (FamCamp), Arnold Village family housing area, the visiting officer's quarters, Arnold Lakeside Club, the Girl Scout Camp and the AEDC recreation area are supplied by the Estill Springs utility district. Other outlying areas are supplied by groundwater wells (AEDC, 2004).

3.11.2 Cooling Water System

A recirculating water system provides cooling water for Base operations in the AEDC area via 17.5 miles of supply and return mains, a cooling tower and water pumps in Bradley, Brumalow, and Rowland Creeks (AEDC, 2004).

3.11.3 Sanitary Sewer System

The wastewater collection system for the AEDC area consists of 9 miles of gravity flow and forced sewer lines, 28 lift stations, and the AEDC sewage treatment plant. A package sewage treatment plant serves Arnold village family housing, the Visiting Officers Quarters, and the Arnold Lakeside Club and Beach. Septic tank systems serve all other areas of the Base including FamCamp, J-6 Steam Plant, Rocket Prep Area, X-Ray Building, Airfield Operations Building, and Gate One (AEDC, 2004).

3.11.4 Stormwater Drainage System

Stormwater is collected within the AEDC by a system of curbs, gutters, underground storm mains and open ditches. A system of 150 sump pumps, 20 miles of underground mains, and

19 miles of open ditches conveys water to Rowland, Bradley, and Brumalow Creeks (AEDC, 2004).

3.11.5 Natural Gas System

Natural gas is supplied to AEDC from the Elk River Public Utilities District. A 1.8-mile non-looped system distributes the gas to various facilities on the Base.

3.11.6 Electrical Distribution System

Electricity is supplied from the Tennessee Valley Authority (TVA). Four 161-kilovolt (kV) lines and two 500-kV lines supply Arnold AFB property. Two 161-kV lines feed the AEDC's main substation. Underground 161-kV lines feed eight distributing substations. Underground and overhead 6.9-kV to 13.8-kV lines supply power to most of AEDC's buildings (AEDC, 2004).

3.11.7 Steam System

Steam is provided by two central plants and distributed via 16 miles of piping. The distribution system includes shallow-trench, aboveground, and buried piping (AEDC, 2004).

3.11.8 Solid Waste System

A variety of wastes are generated at Arnold AFB. Non-hazardous waste is collected from dumpsters throughout the Base and transported by truck to a landfill off-Base. Construction and demolition debris is disposed of on-Base at the designated C&D Landfill. Other solid wastes are managed and disposed of through the Defense Reutilization and Marketing Office (DRMO), or when appropriate through other means as approved by TDEC.

Arnold AFB also participates in a Base-wide reduction, reuse, and recycling program. Over the past few years, total waste generated has been reduced by more than 50 percent. Activities include the recycling of paper, cardboard, scrap steel, and used oil; recycling programs at Arnold Village family housing and recreational sites; and continued communication with and education of Base personnel and the public about the benefits of waste reduction and reuse.

4.0 Environmental Consequences

4.1 Land Use

4.1.1 Proposed Action

Under the Proposed Action, approximately 174,237 square feet of facilities would be converted to semi-improved grounds. Semi-improved grounds are areas where landscape maintenance is performed primarily for functional, operational, or aesthetic reasons. The semi-improved category includes airfield safety zones, rifle ranges, open spaces in developed areas, and gravel parking areas. Land use impacts are summarized by project component in Table 4-1.

TABLE 4-1
Summary of Land Use Impacts
Base-Wide Building Demolition Final EA

Proposed Project	Land Use Impact
Demolition Projects	
Lumber Storage Building	Temporary impacts to 1,200-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
CE Fabrication Shop	Temporary impacts to 2,400-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
Natural Resources Building	Temporary impacts to 800-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
Salt Storage Building	Temporary impacts to 5,729-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.

TABLE 4-1
Summary of Land Use Impacts
Base-Wide Building Demolition Final EA

Proposed Project	Land Use Impact
Administration Building	Temporary impacts to 12,320-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
ETF-B Exhauster	Temporary impacts to 46,593-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
ETF-A Airside	Temporary impacts to 22,141-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
ETF-A Exhauster	Temporary impacts to 10,357-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
ETF-A Reefer	Temporary impacts to 13,122-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
CE Facility	Temporary impacts to 57,260-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
Rocket Storage	Temporary impacts to 256-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
VKF Tunnel M Control Building	Temporary impacts to 322-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.

TABLE 4-1
Summary of Land Use Impacts
Base-Wide Building Demolition Final EA

Proposed Project	Land Use Impact
VKF Vaporizer Control Building	Temporary impacts to 144-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.
PWT Test Fuel Building	Temporary impacts to 1,593-square-foot ground surface area in and around the demolition site. Once the facility has been demolished, hazardous materials removed, utilities capped, BMPs installed, and grading completed, land use would be returned to semi-improved grounds. Temporary impacts to roads from transportation of materials offsite. Benefits include future developable site for Base expansion.

The Proposed Action would have a minimal impact on AEDC land resources. The amount of land use change would be minor. These sites would be considered during the planning phase for future building construction locations. During demolition, heavy equipment would be used to demolish structures and remove building debris. Standard construction/demolition BMPs would limit soil erosion and runoff to adjacent land. The improvements to Base operations would be considered beneficial and would be compatible with adjacent land uses.

4.1.2 No-Action Alternative

No impacts to existing land uses would result from the No-Action Alternative.

4.2 Geomorphology

4.2.1 Proposed Action

The demolition of the buildings would require grading and excavation activities during site preparation. Disturbance to soils would occur from work on buildings and preparation areas adjacent to the buildings. During demolition, heavy equipment would be used to demolish buildings, remove debris, and move and compact soils. Demolition would require clearing and grading the sites, and controls would be implemented to minimize the erosion of surrounding soils due to soil/ground disturbance activities. Overall drainage patterns would not change.

Stormwater control plans would be prepared to identify how sites would be graded following demolition. The plans also would include information about when earthwork would start and stop, establish the degree and length of finished slopes, and specify where and how excess material would be disposed and where borrow materials would be obtained if needed. Berms, diversions, and other stormwater practices that require excavation and filling also would be incorporated into the plan. Crews would be supervised to ensure that the plans are implemented as intended.

Soil disturbance could result in increased erosion potential from loss of ground cover and exposure of bare soils to precipitation and runoff. Potential temporary impacts to water quality from these factors are discussed in Section 4.4. Potential impacts would be avoided or controlled through the use of appropriate BMPs and soil stabilization/revegetation techniques following demolition. Appropriate BMPs, as identified in the AEDC Stormwater Pollution Prevention Plan, would be selected based on site-specific conditions and could include, but not be limited to, sediment barriers (silt fence or straw bales), temporary detention basins, grade stabilization with seed and mulch, and geotextile slope stabilization. Because rainfall is distributed fairly evenly throughout the year, no particular time of year would be likely to reduce the erosion potential. Therefore, it is unlikely that timing of demolition activities could be used to offset potential erosion impacts.

The Proposed Action would have minimal impact on geomorphology. The sites are on lands previously cleared and graded.

4.2.2 No-Action Alternative

No soil disturbance or impacts on geomorphology would result from the No-Action Alternative.

4.3 Hydrology

Impacts to hydrology could result from land clearing, loss of vegetation, and associated accelerated runoff following precipitation events.

4.3.1 Proposed Action

The Proposed Action would result in the demolition of 174,237 square feet of impervious surface area (facilities and surrounding areas). The majority of these areas would be returned to semi-improved grounds. However, some demolition sites, specifically in the CE yard, would be replaced with gravel. Both the grassed areas and the gravel areas would be more pervious than the previous building footprint, thereby reducing the volume of stormwater runoff. However, some minor sedimentation may occur in the gravel areas during peak stormwater runoff events.

Temporary increases in stormwater runoff may occur during construction and demolition activities. However, BMPs would be implemented to minimize potential impacts. Demolition would occur outside of designated floodplains and would have no impact on floodplain elevations. The methods employed for demolition of the designated facilities would vary in relation to the type of structure, its location, the materials encountered in demolition, and the contractor's experience.

The demolition of buildings, parking lots, and roads under the Proposed Action would include stormwater controls specified in Notices of Intent for National Pollutant Discharge Elimination System (NPDES) Stormwater Construction Permits from TDEC. These permits are required for projects disturbing one or more acres. Demolition activities would result in soil disturbance and short term loss of vegetative cover. These activities could result in modified patterns of surface water runoff from the site. Increased runoff from an unvegetated site could result in hydrologic impacts, such as channelization and erosion.

BMPs and onsite stormwater controls would reduce or eliminate runoff from the site to avoid hydrologic impacts to nearby waters. Site stabilization would occur at all sites after demolition and removal have been completed. Erosion and sediment control would take place during demolition using BMPs. Sites would be regraded to contour (if feasible) with available soil. Topsoil would be added if needed and available. Regrading would eliminate or reduce site erosion, soil loss, and drainage problems.

4.3.2 No-Action Alternative

Under the No-Action Alternative, no change from existing conditions would occur. Therefore, no impact on hydrology would result from implementation of the No-Action Alternative.

4.4 Water Quality

4.4.1 Proposed Action

Impacts on water quality could result from demolition activities that result in soil disturbance and exposed soil runoff, presenting the possibility for the transport of sediment into streams. Transport could occur down-slope or into immediately adjacent waters.

Potential impacts to water quality from demolition would be avoided or minimized through implementation of BMPs as described in Section 4.2.

4.4.2 No-Action Alternative

Unpaved parking lots and roads generate minor amounts of soil runoff that may result in minor local impacts to water quality. Such runoff would continue under the No-Action Alternative.

4.5 Safety and Occupational Health

4.5.1 Proposed Action

Two issues are associated with worker safety and building demolition. Workers would have the potential for accidents as a result of operating heavy equipment during demolition activities, and workers could be exposed to asbestos- and lead-containing materials.

Demolition workers would use appropriate protection and would follow OSHA standards and procedures. The demolition contractor would be responsible for ensuring that all contractor employees (and subcontractors) comply with all applicable OSHA standards. Therefore, the safety and occupational health of demolition workers and other persons in the demolition areas would not be impacted. Job Safety Assessments would be prepared prior to performing the work, and the workers would review and sign these documents before working on the job site. This would minimize the potential to encounter unknown site conditions and operational practices.

Two safety instructions have been prepared by AEDC at Arnold AFB. These instructions provide guidance in the removal and disposal of asbestos- and lead-containing materials:

- AEDC Safety, Health, and Environmental Standard E7 - Asbestos
- AEDC Safety, Health, and Environmental Standard E19 - Lead and Heavy Metals

Guidance contained in these instructions would minimize worker exposure to the hazards encountered during removal of these materials.

4.5.2 No-Action Alternative

No impacts to safety and occupational health would result from the No-Action Alternative.

4.6 Noise

Demolition activities from heavy equipment would create noise impacts.

4.6.1 Proposed Action

Heavy equipment such as bulldozers, graders, backhoes, excavators, dump trucks, and cement trucks would generate noise that could affect onsite workers. Demolition equipment typically emits noise in the 86- to 94-dB range. Demolition workers would use hearing protection and would follow OSHA standards and procedures. Demolition activities would occur during daylight hours and overlap normal workday activities. This would minimize generation of noise during the evening hours that could result in adverse impacts.

4.6.2 No-Action Alternative

No noise impacts would result from implementation of the No-Action Alternative.

4.7 Air Quality

Demolition activities could produce fumes from heavy equipment, fugitive dust, and asbestos particulate matter in the atmosphere.

4.7.1 Proposed Action

During demolition, air quality impacts may occur as a result of dust carried offsite and combustive emissions from demolition equipment. The primary risks from blowing dust particles relate to human health and nuisance impacts. Fugitive dust can contribute to respiratory health problems and create an inhospitable working environment. Deposition on surfaces can be a nuisance to those living or working downwind.

Measures that would be implemented to reduce or eliminate fugitive dust emissions would include:

- **Sprinkling/Irrigation.** Sprinkling the ground surface with water until it is moist is an effective dust control method for haul roads and other traffic routes (Smolen et al., 1988). This practice can be used at almost any site. When suppression methods involving water are used, care would be exercised to minimize over-watering that could cause the transport of mud onto adjoining roadways, ultimately increasing the dust problem.
- **Vegetative Cover.** In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetation provides coverage to surface soils and

decreases wind velocity at the ground surface, thus reducing the potential for dust to become airborne.

- Mulch. Mulching can be a quick and effective means of dust control for recently disturbed areas.

4.7.2 No-Action Alternative

Unpaved parking lots and roads generate minor amounts of fugitive dust that may result in temporary minor local impacts to air quality. These releases would continue under the No-Action Alternative.

4.8 IRP and Hazardous Materials

4.8.1 Proposed Action

Twelve of the 14 proposed demolition facilities identified are within the IRP sites in the AEDC complex (Figures 3-4 and 3-5). Contaminated soils could be encountered during the demolition process at these facilities. The VKF Tunnel M Control Building and the Rocket Storage Building lie outside the IRP zone and as a result, contaminated soils should not be encountered at those sites during demolition.

Monitoring would be required during excavation and demolition activities to prevent exposure of workers to potentially hazardous material. The demolition crew would have a health and safety plan and a hazardous materials plan as reference documents in case contaminated soils were encountered. Appropriate health and safety steps would be required during demolition to limit possible exposure to vapors or contaminated soil. Demolition plans would contain provisions detailing the hazard communication process and the removal and disposal options.

As part of the demolition process, a series of protective measures would be taken to ensure correct handling and disposal of potentially hazardous materials. Asbestos-containing materials would be segregated and wrapped prior to disposal. These would be disposed of in the onsite Asbestos Landfill. All other construction/demolition materials are disposed of in the onsite C&D Landfill. Asbestos-containing materials are contained in plastic bags, which are labeled, and then transported by truck to the landfill for disposal. AEDC Safety, Health, and Environmental (SHE) Standard E7 *Asbestos* is used and contains information on the proper management of asbestos-containing materials.

Metal would be segregated where possible and sold for scrap through the Defense Reutilization Program (DRP). Metal that cannot be segregated would be sent to the landfill. Wood would also be segregated and sent to the landfill, where it would be evaluated for recycling. Lead-based paint and other hazardous materials would be containerized and sent offsite to a permitted hazardous waste landfill. Any contaminated soil encountered during demolition would be disposed of in accordance with DoD and Air Force procedures.

All construction and demolition activities would be conducted in compliance with the *Construction and Demolition Waste Management Pocket Guide* (USAF, 2004). Additionally, all solid waste handling would comply with the recycling consent procurement requirement of

Executive Order 13101, Section 6002 of RCRA and the Non-hazardous Solid Waste Diversion Rate Measure of Merit (MoM) letter (January 1999).

4.8.2 No-Action Alternative

No IRP or hazardous materials impacts would result from implementation of the No-Action Alternative.

4.9 Cultural Resources

Impacts analysis focuses on the potential for the Proposed Action to affect the quality and utility of significant historical and cultural resources.

4.9.1 Proposed Action

The project area was previously screened for archaeological resources. Areas where the demolition activities would be conducted were investigated for archaeological resources concerns through consultation with the SHPO in 2003. This effort was documented in Archeological Assessment Report No. 300 (R. Alvey, personal communication, 2004). There are no significant or potentially significant archaeological resources in the area.

Seven of the 14 facilities proposed for demolition may be potentially eligible for listing on the NRHP. Information on these facilities (ETF-B Exhauster, ETF-A Airside, ETF-A Exhauster, ETF-A Reefer, CE Facility, VKF Tunnel M Control Building, and the PWT Test Fuel Building) is shown in Table 3-1. Procedures in the 2003 Programmatic Agreement (PA) will be followed for these seven buildings and the CE Facility.

Prior to demolition, documentation described in the PA signed in 2003 would be provided to the SHPO. Section 106 Consultation would be completed in order to mitigate the adverse effects of the demolition of the ETF-B Exhauster, ETF-A Airside, ETF-A Exhauster, ETF-A Reefer, CE Facility, VKF Tunnel M Control Building, and the PWT Test Fuel Building.

4.9.2 No-Action Alternative

Under the No-Action Alternative, no building demolition would occur. Therefore, no impacts on cultural resources would result from implementation of the No-Action Alternative.

4.10 Traffic Flow

4.10.1 Proposed Action

Demolition activities would cause temporary impacts to roads. It would be necessary to temporarily interrupt traffic in portions of the Base and close parking lots and sections of road during demolition and disposal of building materials.

The following roads may be impacted for short periods during demolition activities:

- North Hap Arnold Drive
- Third Street

- Fifth Street
- Avenue H

Traffic control with flagmen would allow traffic to continue to move without undue delays.

4.10.2 No-Action Alternative

Implementation of the No-Action Alternative would result in no impact to traffic flow.

4.11 Utility Infrastructure

4.11.1 Proposed Action

Demolition activities would cause temporary impacts to utilities. It would be necessary to temporarily interrupt utilities in portions of the Base during demolition and disposal of building materials.

Utilities in the following areas may be impacted for short periods during demolition activities:

- North Hap Arnold Drive
- Third Street
- Fifth Street
- Avenue H

Existing underground utilities would be identified in advance of any demolition activities and avoided during demolition to prevent impacts.

Demolition would have minor effects on solid waste handling, specifically to the C&D Landfill. A new cell is being added to this landfill in FY 2006. As a result, capacity will be more than sufficient for disposal of the construction and demolition debris generated through the Proposed Action.

4.11.2 No-Action Alternative

Implementation of the No-Action Alternative would result in no impact to utilities.

5.0 Plan, Permit, and Management Requirements

No CWA Section 404 permitting would be required from USACE for the Proposed Action. In addition, no CWA Section 401 water quality certification would be required for the Proposed Action.

Notification of asbestos demolition or renovation must be submitted to the State of Tennessee prior to commencing work. Two of the sites (ETF-B Exhauster and CE Facility) must obtain coverage under the Tennessee General Permit (No. TNR 10-0000) for stormwater discharges from construction activities. The General Permit requires preparation and submittal of a site-specific Stormwater Pollution Prevention Plan (SWPPP) along with a Notice of Intent (NOI). Additionally, the State of Tennessee must be provided with prior notification of any construction and demolition activities which may disturb IRP sites in accordance with the installation's Hazardous and Solid Waste Amendments (HSWA) permit.

There is a regulatory requirement to obtain a stormwater permit if 1 acre (43,560 square feet) or more of land is disturbed during demolition (Jennifer Innis, TDEC, personal communication, July 2004). Appropriate erosion and sediment control measures would be implemented to control runoff.

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7.0 List of Contacts

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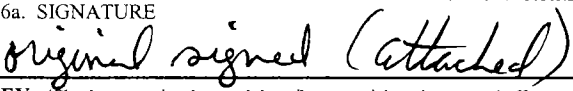

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Appendix A
Air Force Form 813s —
Request for Environmental Impact Analysis

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS			Report Control Symbol RCS: AAFB-04-052	
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).				
SECTION I – PROPONENT INFORMATION				
1. TO (Environmental Planning Function) ATA Environmental/ Phil Sherrill	2. FROM (Proponent organization and function address symbol) ID10/GOLD	2a. TELEPHONE NO. 5711		
3. TITLE OF PROPOSED ACTION ANZY010067J: DEMO VKF TUNNEL M CONTROL BUILDING				
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) DEMOLISH FACILITY AS PART OF BASE RIGHTSIZING INITIATIVE				
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) DEMOLISH BUILDING 679 AND RESTORE GROUNDS				
6. PROPONENT APPROVAL (Name and grade) MICHAEL GOLD	6a. SIGNATURE 		6b. DATE 16 March 2004	
SECTION II – PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)				
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
9. WATER RESOURCES (Quality, quantity, source, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)	<input type="checkbox"/> +	<input type="checkbox"/> 0	<input checked="" type="checkbox"/> -	<input type="checkbox"/> U
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)	<input type="checkbox"/> +	<input type="checkbox"/> 0	<input checked="" type="checkbox"/> -	<input type="checkbox"/> U
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)	<input type="checkbox"/> +	<input type="checkbox"/> 0	<input checked="" type="checkbox"/> -	<input type="checkbox"/> U
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
16. OTHER (Potential impacts not addressed above.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
SECTION III – ENVIRONMENTAL ANALYSIS DETERMINATION				
17.	<input checked="" type="checkbox"/>	PROPOSED ACTION QUALIFIES FOR CATERGORICAL EXCLUSION (CATEX) # _____; OR PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.		
18. REMARKS Environmental Assessment required. <u>open action</u> SEE CONTINUATION SHEET FOR REVIEW COMMENTS.				
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Frank A. Duncan, GS-13 Deputy, Environmental Management Division		19a. SIGNATURE 		19b. DATE 14 Apr 04

~~18. AAFB-04-052~~**Interdisciplinary Team Review**

Public Affairs: No issues.

Compliance (Air/Water): Any sewer drains and potable water connections, if any, must be properly capped

Natural Resources: No issues.

Cultural Resources: This building was assessed by Geo-Marine during their 2003 study of buildings and districts on the base. It is considered eligible to the NRHP as a contributing building of the Test Primary District. Their redommendations are that it is "Eligible under National Register Criteria A and C and Criteria Consideration G." Because of this a Section 106 consultation with the SHPO will be needed. *Refers Sec. VI of PA. [Signature]*

open action

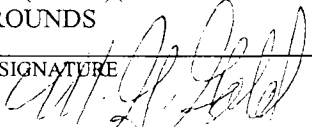
Hazardous Materials: No issues.

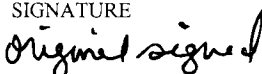
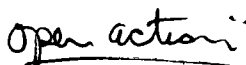

Hazardous Waste: All metal would go to the scrap metal yard and the rest would go to the C&D Landfill – after any possible asbestos has been removed.

Restoration: No issues.

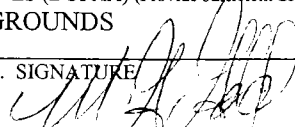
Safety/Health: Lead paint and possible small amounts of asbestos. Mastics.

OK PGK 14 Apr 04

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		Report Control Symbol RCS: AAFB-04-052	
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).			
SECTION I – PROPONENT INFORMATION			
1. TO (Environmental Planning Function) ATA Environmental/ Phil Sherrill		2. FROM (Proponent organization and function address symbol) ID10/GOLD	
		2a. TELEPHONE NO. 5711	
3. TITLE OF PROPOSED ACTION ANZY010067J: DEMO VKF TUNNEL M CONTROL BUILDING			
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) DEMOLISH FACILITY AS PART OF BASE RIGHTSIZING INITIATIVE			
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) DEMOLISH BUILDING 679 AND RESTORE GROUNDS			
6. PROPONENT APPROVAL (Name and grade) MICHAEL GOLD		6a. SIGNATURE 	
		6b. DATE 16 March 2004	
SECTION II – PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U – unknown effect)			
			+ 0 - U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)			X
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)			X
9. WATER RESOURCES (Quality, quantity, source, etc.)			X
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)			X
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)			X
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)			X
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)			X
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)			X
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)			X
16. OTHER (Potential impacts not addressed above.)			X
SECTION III – ENVIRONMENTAL ANALYSIS DETERMINATION			
17. <input checked="" type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATERGORICAL EXCLUSION (CATEX) # A2.3.11 ; OR <input checked="" type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.			
18. REMARKS CATEX A2.3.11. Actions similar to other actions which have been determined to have an insignificant impact in a similar setting as established in an EA resulting in a FONSI. REFERENCE: Environmental Assessment for Demolition of Buildings 620, 690, 691, 692, and 1100 at Arnold AFB, TX (AAFB-02-151) SEE CONTINUATION SHEET FOR REVIEW COMMENTS.			
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Frank A. Duncan, GS-13 Deputy, Environmental Management Division		19a. SIGNATURE 19b. DATE	

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		Report Control Symbol RCS: AAFB-04-051			
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).					
SECTION I – PROPONENT INFORMATION					
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3. TITLE OF PROPOSED ACTION ANZY010067J: DEMO VKF VAPORIZER CONTROL BUILDING					
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) DEMOLISH FACILITY AS PART OF BASE RIGHTSIZING INITIATIVE					
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) DEMOLISH BUILDING 665 AND RESTORE GROUNDS					
6. PROPONENT APPROVAL (Name and grade) MICHAEL GOLD		6a. SIGNATURE 			
		6b. DATE 16 March 2004			
SECTION II – PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)			+ 0 - U		
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)			X		
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)			X		
9. WATER RESOURCES (Quality, quantity, source, etc.)			X		
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)			X		
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)			X		
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)			X		
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)			X		
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)			X		
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)			X		
16. OTHER (Potential impacts not addressed above.)			X		
SECTION III – ENVIRONMENTAL ANALYSIS DETERMINATION					
17. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 50px; height: 20px;"></td></tr><tr><td style="text-align: center;">X</td></tr></table> PROPOSED ACTION QUALIFIES FOR CATERGORICAL EXCLUSION (CATEX) # _____; OR PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.					X
X					
18. REMARKS Environmental Assessment required.  SEE CONTINUATION SHEET FOR REVIEW COMMENTS.					
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Frank A. Duncan, GS-13 Deputy, Environmental Management Division		19a. SIGNATURE 			
		19b. DATE 14 Apr 04			

OK April 14 Apr 04

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS			Report Control Symbol RCS: AAFB-04-051	
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).				
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6. PROPONENT APPROVAL (Name and grade) MICHAEL GOLD	6a. SIGNATURE 		6b. DATE 16 March 2004	
SECTION II – PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U – unknown effect)				
			+	0
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)			X	
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)			X	
9. WATER RESOURCES (Quality, quantity, source, etc.)			X	
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)				X
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)				X
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)			X	
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)			X	
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)			X	
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)			X	
16. OTHER (Potential impacts not addressed above.)			X	
SECTION III – ENVIRONMENTAL ANALYSIS DETERMINATION				
17.	<input checked="" type="checkbox"/>	PROPOSED ACTION QUALIFIES FOR CATERGORICAL EXCLUSION (CATEX) # A2.3.11 ; OR <i>Rwm</i>		
	<input checked="" type="checkbox"/>	PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.		
18. REMARKS CATEX A2.3.11: Actions similar to other actions which have been determined to have an insignificant impact in a similar setting as established in an EA resulting in a FONSI. REFERENCE: Environmental Assessment for Demolition of Buildings 620, 690, 691, 692, and 1100 at Arnold AFB, TX (AAFB-02-151) SEE CONTINUATION SHEET FOR REVIEW COMMENTS.				
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Frank A. Duncan, GS-13 Deputy, Environmental Management Division		19a. SIGNATURE		19b. DATE

18. AAFB-04-051

Interdisciplinary Team ReviewPublic Affairs: No issues.Compliance (Air/Water): Any sewer drains and potable water connections, if any, must be properly capped.Natural Resources: No issues.Cultural Resources: No cultural resource issues with this demolition. *Rwm This is not an historic building.*Hazardous Materials: No issues.Hazardous Waste: All metal would go to scrap metal and rest of building would go to the C&D LandfillRestoration: No issues.Safety/Health: Full of asbestos on piping and roof. Lead paint also.

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		Report Control Symbol RCS: AAFB-04-053	
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).			
SECTION I – PROPONENT INFORMATION			
1. TO (Environmental Planning Function) ATA Environmental/ Phil Sherrill		2. FROM (Proponent organization and function address symbol) ID10/GOLD	
3. TITLE OF PROPOSED ACTION ANZY010067P: DEMO PWT TEST FUEL BUILDING		2a. TELEPHONE NO. 5711	
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) DEMOLISH FACILITY AS PART OF BASE RIGHTSIZING INITIATIVE			
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) DEMOLISH BUILDING 750 AND RESTORE GROUNDS			
6. PROPONENT APPROVAL (Name and grade) MICHAEL GOLD		6a. SIGNATURE <i>original signed (attached)</i>	
		6b. DATE 16 March 2004	
SECTION II – PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)			+ 0 - U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)			X
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)			X
9. WATER RESOURCES (Quality, quantity, source, etc.)			X
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)			X
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)			X
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)			X
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)			X
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)			X
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)			X
16. OTHER (Potential impacts not addressed above.)			X
SECTION III – ENVIRONMENTAL ANALYSIS DETERMINATION			
17.		PROPOSED ACTION QUALIFIES FOR CATERGORICAL EXCLUSION (CATEX) # _____; OR	
X		PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.	
18. REMARKS Environmental Assessment required. <i>open action</i> SEE CONTINUATION SHEET FOR REVIEW COMMENTS.			
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Frank A. Duncan, GS-13 Deputy, Environmental Management Division		19a. SIGNATURE <i>[Signature]</i>	
		19b. DATE 14 Apr 04	

18. AAFB-04-053

Interdisciplinary Team ReviewPublic Affairs: No issues.Compliance (Air/Water): Any sewer drains and potable water connections, if any, must be properly capped.Natural Resources: No issues.

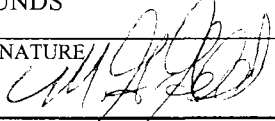
Cultural Resources: This building was assessed during the 2003 Geo-Marine study of base buildings and districts. It is considered to be a contributing building to the proposed Test Primary historic district. Their recommendations are that it is "Eligible under Criteria, A, B, and C and under Criteria Consideration G." Because of this a Section 106 consultation with the SHPO will be needed to determine what is to be done with it. *See Section VI of the PA. RWM* *Open action*

Hazardous Materials: No issues.Hazardous Waste: No issues.

Restoration: There may be residual contamination in the soil around this facility. Any further assessment could be best managed following the demo.

Safety/Health: This building is full of asbestos and has lead paint. Asbestos is on the piping and the roof, etc.

OK 11/14/04

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS			Report Control Symbol RCS: AAFB-04-053			
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).						
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6. PROPONENT APPROVAL (Name and grade) MICHAEL GOLD		6a. SIGNATURE 			6b. DATE 16 March 2004	
SECTION II – PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)						
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8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)						
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10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)						
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)						
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15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)						
16. OTHER (Potential impacts not addressed above.)						
SECTION III – ENVIRONMENTAL ANALYSIS DETERMINATION						
17. <input checked="" type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATERGORICAL EXCLUSION (CATEX) # A2.3.11 ; OR <input checked="" type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.						
18. REMARKS CATEX A2.3.11: Actions similar to other actions which have been determined to have an insignificant impact in a similar setting as established in an EA resulting in a FONSI. REFERENCE: <i>Environmental Assessment for Demolition of Buildings 620, 690, 691, 692, and 1100 at Arnold AFB, TN (AAFB-02-151)</i> SEE CONTINUATION SHEET FOR REVIEW COMMENTS.						
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Frank A. Duncan, GS-13 Deputy, Environmental Management Division		19a. SIGNATURE			19b. DATE	

Environmental Impact Analysis: 000292 - Demo 1470,1472,1481**From:**Juan Ramos**Proponent Org:**SDF**Project:**ANZY010067K,F,G**Purpose And Need:** Demolition of facilities 1470 (Lumber Storage Bldg), 1472 (CE Fab Shop) and 1481 (Natural Resource Bldg).**Description And Alternative:** Survey and identify any Hazardous Materials on existing facilities to be demolished.

Name:	Impact:	Status:	Description:
Air Installation Compatable:	No Effect	Closed	
Air Quality:	No Effect	Closed	
Water Resources:	No Effect	Closed	
Safety And Occupational Health:	No Effect	Closed	State notification is required due to demolition. Also, lead paint and asbestos is present.
Hazardous Materials:	No Effect	Closed	Obtain MSDS for any hazardous materials identified. Determine if materials are to be reused or excessed.
Hazardous Waste:	No Effect	Open	Existing metal can go to scrap metal. Concrete and other building debris can go to the C&D Landfill,
Biological Resources:	No Effect	Closed	Site protection devices should be installed and maintained throughout the demolition operation to prevent silt and sediments from entering the storm water system.
Cultural Resources:	No Adverse Effect	Open	These buildings have not yet been evaluated for historic significance. These buildings should be evaluated for historic significance and if determined to be historically significant a demolition recordation should be completed prior to demolition.
Geology And Soils:	No Effect	Closed	
Socioeconomic:	No Effect	Closed	

Other Impacts:**Remarks:****Determination:** Further Environmental Analysis Required**Determination Justification:** Action will be evaluated on base-wide demolition EA scheduled for completion on 27-May-05.**Environmental Planning Approval Signature** ---- Philip Sherrill **Comments** ----

Environmental Final Approval Signature ---- Philip Sherrill <i>Comments</i> ----
Media Management Approval Signature ---- Pam King <i>Comments</i> ----
ELAP Approval Signature ---- Richard McWhite <i>Comments</i> ----
SDE Director Approval Signature ---- Frank Duncan <i>Comments</i> ----

Environmental Impact Analysis: 000312 - DEMO B/1485**From:**Juan Ramos**Proponent Org:**SDF**Project:**ANZY 01-0067M**Purpose And Need:** Coordinate the disposal of Facility 1485, Salt Storage Bldg. Survey and sample for hazardous materials.**Description And Alternative:** Identify any hazardous materials and special disposal procedures to include in the facility demolition design.

Name:	Impact:	Status:	Description:
Air Installation Compatable:	No Effect	Closed	
Air Quality:	No Effect	Closed	
Water Resources:	No Effect	Closed	
Safety And Occupational Health:	No Effect	Closed	State notification is required since this is a demolition. Possible asbestos and lead paint. Verify during design phase.
Hazardous Materials:	No Effect	Closed	Obtain and review MSDS for any hazardous materials identified.
Hazardous Waste:	No Effect	Closed	
Biological Resources:	No Effect	Closed	Site protection devices should be installed and maintained throughout demolition to prevent silt and sediments from entering the storm drain system.
Cultural Resources:	No Adverse Effect	Open	This facility has not yet been evaluated for historic significance. This building should be evaluated for historic significance and if found to be historically significant, a demolition recordation should be completed prior to demolition.
Geology And Soils:	No Effect	Closed	
Socioeconomic:	No Effect	Closed	

Other Impacts:**Remarks:****Determination:** Further Environmental Analysis Required**Determination Justification:** Building will be included in Demolition EA.**Environmental Planning Approval Signature** ---- Philip Sherrill *Comments* ----**Environmental Final Approval Signature** ---- Philip Sherrill *Comments* ----

Media Management Approval Signature ---- Pam King <i>Comments</i> ----

EIAP Approval Signature ---- Richard McWhite <i>Comments</i> ----
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SDE Director Approval Signature ---- Frank Duncan <i>Comments</i> ----

Environmental Impact Analysis: 000313 - DEMO B/1433**From:**Juan Ramos**Proponent Org:**SDF**Project:**ANZY010067B**Purpose And Need:** Coordinate the disposal of Facility 1433, Admin Facility (Little Tin Building). Survey and sample for hazardous materials.**Description And Alternative:** Identify any hazardous materials and provide any special disposal procedure to include in the design of the facility demolition.

Name:	Impact:	Status:	Description:
Air Installation Compatable:	No Effect	Closed	
Air Quality:	No Effect	Closed	
Water Resources:	No Effect	Closed	
Safety And Occupational Health:	No Effect	Closed	Possible asbestos and lead paint issues. Address during the design. State notification is required due to demolition.
Hazardous Materials:	No Effect	Closed	Contact Environmental Quality (ext. 5550 or ext. 7749) to obtain MSDS for hazardous materials found. MSDS will be required for disposal of hazardous materials.
Hazardous Waste:	Unknown Effect	Open	Must identify possible hazardous materials to determine if any must be disposed of as hazardous waste. Metal can go to scrap metal. Other demolition debris can go to the C&D Landfill.
Biological Resources:	No Effect	Closed	
Cultural Resources:	No Adverse Effect	Open	This facility has not yet been evaluated for historic significance because it is only 26 years. It must be evaluated for historical significance to determine whether or not a recordation and consultation with the SHPO is necessary.
Geology And Soils:	No Effect	Closed	
Socioeconomic:	No Effect	Closed	

Other Impacts:**Remarks:****Determination:** Further Environmental Analysis Required**Determination Justification:** Project will be added to the base-wide demolition EA.**Environmental Planning Approval Signature** ---- Philip Sherrill *Comments* ----

Environmental Final Approval Signature ---- Philip Sherrill <i>Comments</i> ----
Media Management Approval Signature ---- Pam King <i>Comments</i> ----
EIAP Approval Signature ---- Richard McWhite <i>Comments</i> ----
SDE Director Approval Signature ---- Frank Duncan <i>Comments</i> ----

Environmental Impact Analysis: 000501 - Building Demolition**From:**Mike Gold**Proponent Org:**ID10**Project:**See Description

Purpose And Need: AEDC has many facilities that are underutilized, no longer suitable for their intended purpose, energy and maintenance drains, or uneconomical to repair. Demolition of these facilities is part of a base rightsizing and modernization program to reduce maintenance, operation, and utility costs, and to remove unsightly facilities from the installation. Restoration of the grounds will provide land space for future expansion of the base.

Description And Alternative: Demolish base facilities: 879 (ETF-B Exhauster-ANZY049291); 881 (ETF-A Airside-ANZY049238); 882 (ETF-A Exhauster-ANZY049240); 884 (ETF-A Reefer-ANZY049239); 1478 (CE Facility-ANZY010067N); and 2216 (Rocket Storage-ANZY059003). Demolition to include asbestos & lead removal, hazardous waste disposal, capping utilities, and restoring grounds.

Name:	Impact:	Status:	Description:
Air Installation Compatible:	No Effect	Closed	
Air Quality:	Unknown Effect	Open	Many of these proposed facilities are permitted exhaust points identified in our Title V Air Permit. Prior to starting construction, any change to the exhaust stacks must be submitted and approved by TDEC.
Water Resources:	Unknown Effect	Open	Depending upon the facility, AEDC could be required to obtain TDEC approval for storm water, wastewater or potable water prior to initiating construction.
Safety And Occupational Health:	No Effect	Closed	Notification to the TDEC will be required during the execution stage prior to demolition or asbestos removal. Lead paint will also be an issue.
Hazardous Materials:	No Effect	Closed	
Hazardous Waste:	Adverse Effect	Closed	Lead contaminated wastes would have to be disposed of as hazardous wastes. Any pieces of pure lead could be recycled. Asbestos waste would go to Asbestos Landfill. Should try to recycle hazardous materials (freons) and oils. Scrap as much metal as possible. Other demolition debris could go to the C&D Landfill.
Biological Resources:	No Effect	Closed	Site protection devices should be installed and maintained throughout the demolition project to prevent silt and sediment from entering the storm drain system.
Cultural Resources:	Unknown Effect	Open	No Categorical Exclusions (contained in the PA) apply, recordation and 106 Consultation will be required for each building before demolition.
Geology And Soils:	No Effect	Closed	

Socioeconomic:	No Effect	Closed	
Other Impacts:			
Remarks:			
Determination: Further Environmental Analysis Required			
Determination Justification: Base-wide Demolition EA will be prepared which includes these buildings.			
Environmental Planning Approval Signature ---- Philip Sherrill <i>Comments</i> ----			
Environmental Final Approval Signature ---- Philip Sherrill <i>Comments</i> ----			
Media Management Approval Signature ---- Pam King <i>Comments</i> ----			
EIAP Approval Signature ---- Richard McWhite <i>Comments</i> ----			
SDE Director Approval Signature ---- Frank Duncan <i>Comments</i> ----			